RESOURCE MANAGEMENT

Nahmint Watershed Review 1990

Province of
British Columbia

Ministry
of Forests

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V.1

Executive summary

91-05125/

The attached report updates the 1975 Nahmint Watershed Integrated Resource Study and is based upon both technical deliberations among the participating ministries and organizations, and the results of consultation with interest groups and the public. These consultations took place during open house information sessions at Nanaimo, Victoria and Port Alberni, as well as during a field-tour in the Nahmint Valley itself.

The original study was considered a state-of-the-art planning effort at the time of its acceptance in 1975. Changes to its terms and conditions in 1980 resulted principally in larger-scale, more progressive clearcutting practices than were originally proposed for parts of the Nahmint valley. The 1990 Review reverses that practice and lays down conditions which if approved, will result in smaller, more widely dispersed cutblocks throughout the valley. Cutblock size will vary from as little as one hectare to a typical size of 30 hectares. Those over 40 hectares will be the exception (Section 4.4.2). Increased use of long-reach and alternative logging systems is also recommended.

The review team proposes that resource managers plan to leave riparian corridors of natural forest (Section 4.1.4) and an extensive network of biodiversity corridors throughout the valley (Map 2). Special harvesting practices are recommended adjacent to these corridors and elsewhere in the valley to minimize the risk of windthrow and contribute to overall biological diversity in the watershed.

Approximately 140 hectares of land surrounding the head of Nahmint Lake is proposed for as a Provincial Park or forest recreation site, and the 6 000-hectare Gibson-Klitsa Plateau is proposed for study as a wilderness recreation area.

A recreation management plan is proposed for completion by December 31, 1991 and a recommendation is made to facilitate existing and future use of the valley by guides, outfitters and commercial tourism operators, compatible with recreation opportunities for the general public.

A follow-up committee is proposed to provide key communication between interest groups, the general public and resource managers as future natural resource development takes place. Finally, the review team recommends that interest groups and representatives of the public be invited to participate in preparation of a new integrated resource management plan, to be scheduled for completion by 1996.

Note to the reader

This report, titled Nahmint Watershed Review 1990, presents recommendations which update the Nahmint Watershed Integrated Resource Study, first completed in 1975 and later revised, principally in 1980 and to a further minor extent in 1989.

Report format

The report consists of two volumes:

- Volume I describes the review process and the Review Team's recommendations. It also contains a summary of the comments received from members of the public, along with the team's responses to those comments.
- Volume II contains the transcripts of verbal presentations received at each of the three public information sessions held during August and early September, as well as copies of all written submissions received by the team.

Although the standards of the original 1975 study form the foundation of the review, the 1990 report presents its recommendations in point-form similar to the manner of the 1980 and 1989 versions, rather than the narrative form evident in the 1975 version.

The 1975 report identified 18 separate special management areas in the Nahmint Valley and listed recommendations specific to each. The 1990 Review Team concluded that a nineteenth special management areas are warranted and that certain of the original special management areas should now be managed under a common set of goals, standards and strategies.

To aid comparison between the original and the revised study, all of the special management areas have been retained on the maps as originally depicted. Those that are proposed for management to a common standard have been combined in the text of section 6.3 which describes the 1990 Review Team's area-specific recommendations in detail.

Information note

In an effort to provide the reader with information pertinent to past and present management of the Nahmint Valley, we have taken the liberty of adding notes at certain points in our report. Although presented in-situ, these notes are not intended as part of the report, but offer information which the Review Team hopes the reader will find valuable. Each note is clearly identified and framed to separate it from the main text.

Preface

Integrated resource management requires interdisciplinary effort. A multidisciplinary group prepared the original Nahmint Watershed Integrated Resource Study in 1975, therefore the Review Team which prepared this report compromises representatives from each of the agencies which helped prepare the 1975 study.

The Ministry of Forests led the 1990 Review Team, because the Nahmint Valley lies within Tree Farm Licence 44, which is administered under the Forest Act. MacMillan Bloedel Ltd. was represented on the team because the forest company has management responsibility for the Nahmint Valley under the terms of their Tree Farm License Agreement.

In order to broaden the outlook of the 1990 Review, the Ministry of Forests invited additional provincial government ministries and the board of directors of the Alberni Clayoquot Regional District to participate (Table 1).

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Volume II (Available on request from the Port Alberni Forest District)

Part A

Transcripts of verbal presentations at Nahmint Review open house sessions, 1990

Part B

Copies of written submissions received by Nahmint Review Team, 1990

1.0 Introduction

The Nahmint Watershed Integrated Resource Study was one of a series of such studies undertaken by the Forest Service during the early 1970s, in order to develop a model integrated planning method. The 1975 effort resulted in a then-state-of-the-art integrated management plan, which has been the guide to development of the valley's forest resources over the past 15 years.

Early in 1990, media reports drew public attention to a rock slide associated with construction of a logging road near Nahmint Lake. Public reaction to this event prompted the Ministry of Forests executive to initiate this technical review of the 1975 study.

There are several reasons why such a review is appropriate at this time:

- Certain standards laid down in the 1975 study's recommendations were amended in 1980 to allow the Tree Farm Licensee, MacMillan Bloedel Ltd., operational flexibility. Although some results of this flexibility were neutral or beneficial in their effect, others such as increased average cutblock size, are not in keeping with present-day expectations for integrated resource management and must be changed.
- In 1989 the Ministry of Forests directed the tree farm licensee to complete a recreation inventory and a landscape sensitivity inventory. The licensee completed both in the autumn of 1990. Intensive recreation and landscape planning can now proceed.
- Several Roosevelt elk were transplanted into the upper Nahmint Valley in 1989. This re-introduction into historic elk habitat has shown early signs of success and the herd is the subject of ongoing research.
- A review of the 1975 study and its application over the past 15 years is appropriate in order to introduce revised management strategies for the natural resources of the valley and establish a public follow-up committee to monitor future resource development there.

During the public involvement phase of this review, the message from many people was clear. Their opinion was that the 1975 study appears to have been well done and many of its standards remain relevant to proper management of the natural resources of the Nahmint Valley in the 1990's; whereas some of the 1980 amendments set standards that are unacceptable today. The Review Team agreed and have made the standards of the original 1975 study the basis for our consideration of revised standards for the 1990s. The standards presented in the 1980 and 1989 revisions to the original study have not been retained, except in certain instances where the Review Team believes that they do represent an improvement over the environmental standards of 1975.

Table 1: Organizations participating in the Nahmint Watershed Review 1990

Information Note

Fifteen years have passed since the original study was tabled and much organizational change has occurred within government agencies and MacMillan Bloedel Ltd., therefore the names and titles of most agencies have changed. The functions of the agencies involved in the 1990 review essentially coincide with those which completed the 1975 study.

Federal government

1.	Fisheries and Oceans Canada South Coast Division, Nanaimo	J. Lamb

Provincial government

1.	Ministry of Agriculture and Fisheries Aquaculture Operations, Victoria	J. Truscott
2.	Ministry of Energy, Mines and Petroleum Resources Mineral Policy Branch, Victoria	G. McLaren
3.	Ministry of Environment Vancouver Island Region, Nanaimo	M. Whately G. Reid I. McDougall
4.	Ministry of Forests Port Alberni Forest District	E. Beadle[1] R. Brand J. Marc
	Vancouver Forest Region, Burnaby	B. Thomson
	Integrated Resources Branch, Victoria	S. Currie
5.	Ministry of Native Affairs[2] Natural Resource Management, Victoria	C. McNichol N. May
6.	Ministry of Parks Strathcona District, Parksville	L. Boudreau
7.	Ministry of Tourism[2] Sustainable Development Branch, Victoria	P. Bekker

Local government

Alberni - Clayoquot Regional District[2] Board of Directors, Port Alberni	M. Kokura

Tree farm licensee

MacMillan Bloedel Ltd. Sproat Lake Woodlands Division, Port Alberni	W. Gilmour

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1. Appointed chairperson of the 1990 review team.
2. Participated in 1990 review only.

2.0 Description of the Nahmint Watershed

2.1 Location and area

The Nahmint watershed lies in south central Vancouver Island and is 19 529 hectares in size. The valley drains into the Nahmint River,which flows southeast from its headwaters on the eastern slopes of the Gibson-Klitsa plateau to its mouth in Nahmint Bay on Alberni Inlet. Eight-kilometre-long Nahmint Lake occupies a surface area of 725 hectares in mid-valley (Figure 1).

The watershed has varied topography, and its elevation ranges from sea level to 1 643 metres at the peak of Klitsa Mountain. The valley is long and narrow (36 kilometres in length by five kilometres wide), while its profile is essentially U- shaped with few large tributary valleys.

2.2 Bedrock geology and landforms

(See original [1975] text in Section 2.2 of Appendix A.1).

2.3 Climate

(See original [1975] text in Section 2.3 of Appendix A.1).

2.4 Hydrology

(See original [1975] text in Section 2.4 of Appendix A.1).

2.5 Vegetation

Most of the forest of the Nahmint valley lies within the CWHb 1 (Windward Sub-montane Maritime) and CWHb 2 (Windward Montane Maritime) variants of the Coastal Western Hemlock biogeoclimatic zone[1], while certain high elevation sites lie within the Mountain Hemlock biogeoclimatic zone. The most abundant coniferous species are western hemlock *(Tsuga heterophylla)*, western redcedar *(Thuja plicata)*, amabilis fir *(Abies amabilis)* and Douglas-fir *(Pseudotsuga menziesii)* with Sitka spruce *(Picea sitchensis)* and mountain hemlock *(Tsuga mertensiana)* common but less abundant. Most common understory plants include huckleberry *(Vaccinium)*, salal *(Gaultheria shallon)*, sword fern *(Polystichum Munitum)*, deer fern *(Blechnum spicant)* and vanilla leaf *(Achlys triphylla)*.

2.6 Wildlife

(See original [1975] text in Section 2.6 of Appendix A.1).

2.7 Fish

(See original [1975] text in Section 2.47 of Appendix A.1).

2.8 Mineral potential of the Nahmint Watershed

Mineral exploration has never been extensive in the Nahmint valley. The geological database for this area is presented at a regional scale, hence the following comments on mineral potential are of a general nature. Should future proposals be made to restrict mineral exploration in this valley, more detailed geological data would be required to provide input for that decision.

Triassic aged volcanic rocks of the Karmutsen Formation underlie the majority of the valley. Limestone of the Quatsino Formation has been identified to the southwest of Nahmint Mountain but is not presently known in the Nahmint watershed. A granitic intrusion cuts the volcanic rocks immediately north of Nahmint Bay and extends to just north of Hocking Point on Alberni Inlet. A large fault zone extends from beyond the headwaters of the valley, along the north side of Nahmint Lake and over the ridge into the Mactush Creek Valley. A smaller fault truncates the granite body in the lower Nahmint Valley.

Elsewhere in this region of Vancouver Island, faults and shear zones in the Karmutsen volcanics are known to host quartz veins that carry copper-gold mineralization. Mineral occurrences similar to this are present just outside the Nahmint watershed to the north and south of Nahmint Bay. There is potential for similar mineralization in the fault zones identified within the study area . This style of mineralization, while common in the region, has not yet proven to be economically significant; however, exploration continues near the known occurrences as shown by the mineral claims that are currently held in the lower Nahmint Valley. Assessment reports submitted to the Ministry of Energy, Mines and Petroleum Resources record work conducted here and demonstrate the past exploration interests in this particular area.

Based on the above information, the mineral potential of the Nahmint watershed currently appears to be low over much of the area and low-to-moderate in the lower valley and along the known fault zones. However, elements favorable for mineralization, such as fault zones, granitic rocks and mineral occurrences nearby, suggest that prospecting anywhere in the valley can be expected in the future. (See also Section 3.1.)

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[1] *Site Diagnosis, Tree Species Selection and Slashburning Guidelines for Vancouver Forest Region*, Land Management Handbook Number 8, Province of British Columbia, Ministry of Forests

Figure 1 Nahmint valley 1:250 000

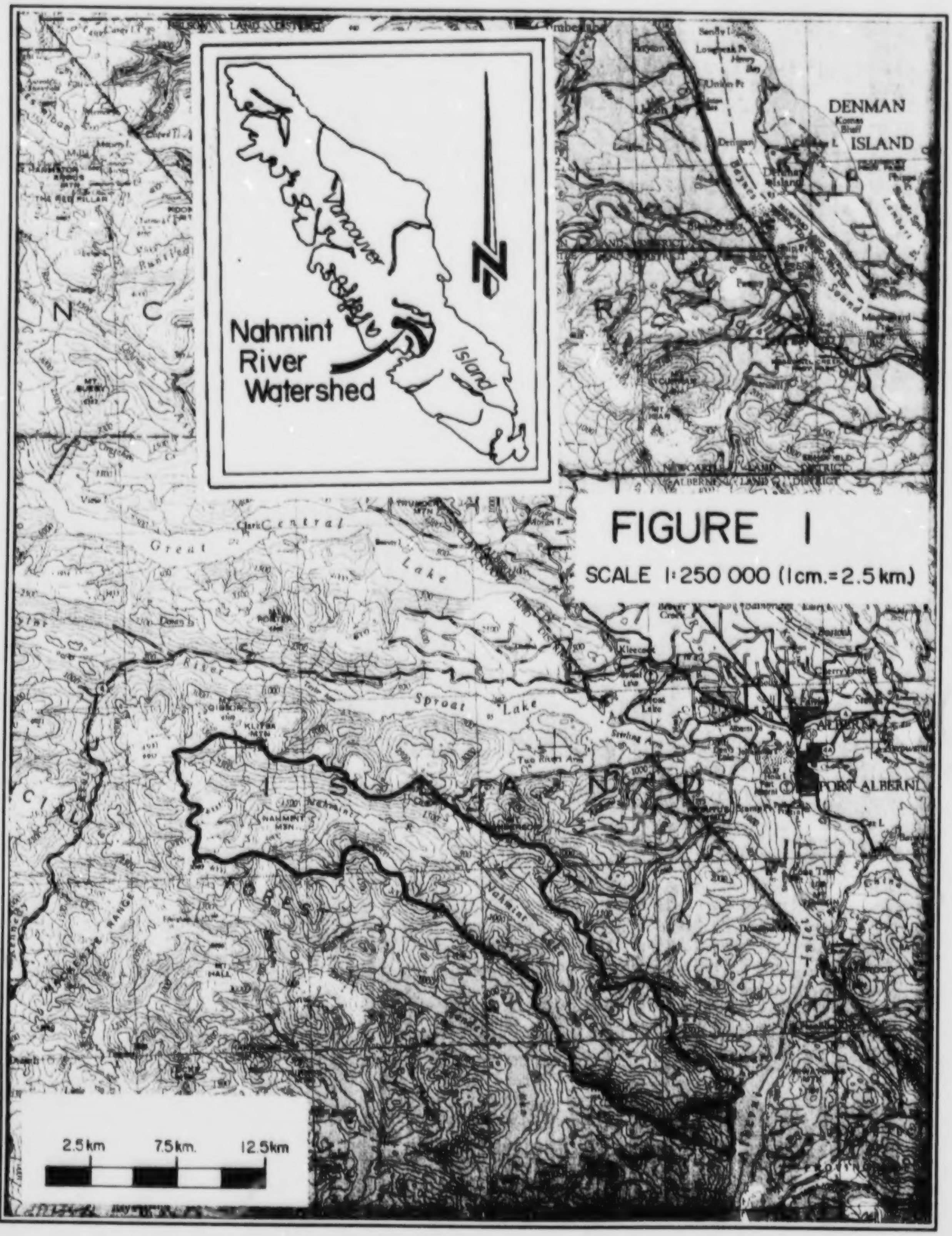
FIGURE I
SCALE 1:250 000 (1cm.=2.5 km)
Nahmint
River
Watershed
Vancouver
Island
N
2.5 km
7.5 km.
12.5 km
DENMAN
ISLAND
Great
Central
Lake
Sproat
Lake
Two Rivers Arm
Nahmint
NAHMINT MTN
KLITSA MTN
PORT ALBERNI
ALBERNI
Inlet
N
C
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ALBERNI LAND DISTRICT

2.9 Small hydro project potential in the Nahmint Watershed

In December 1988, B.C. Hydro and Power Authority issued a Request for Proposals for independent power produce projects of greater than 5 MW capacity. In March 1989, Alberni Power Corp. submitted a preliminary proposal to the province, to develop a 26 MW hydro-electric project on Nahmint Lake.

A preliminary review of the proposal by both the Ministry of Environment and the Department of Fisheries and Oceans determined that a dam on Nahmint Lake would:

- destroy fish spawning habitat,;
- jeopardize existing chinook, chum and steelhead enhancement programs; and,
- alienate important elk and deer habitat upstream of the proposed dam.

Subsequently the proposal was not accepted for further consideration by B.C. Hydro. In September 1989, the proponents cancelled their water license application and abandoned the proposal. Currently there are no proposals to develop hydro projects within the watershed.

2.10 Timber values

2.10.1 Forest land (Table 2)

The Nahmint Valley is 19 529 hectares in size and all but 138 hectares are public lands. Productive forest land in the valley totals 15 170 hectares, of which 12 429 hectares are presently (1989) covered with old-growth forest, 2 055 hectares are covered with young forest and 605 hectares are awaiting scheduled reforestation.

2.10.2 Timber volumes (Table 3)

The 12 317 hectares of mature timber in the valley totals some 9 129 300 cubic metres of wood. Although virtually all the land in the Nahmint drainage is public, all the trees are not. Some 29 percent, or 2 639 000 cubic metres of the timber in the valley is alienated crown timber held by MacMillan Bloedel Ltd. in old temporary tenures which date back to the early years of this century. Once the existing timber on those old tenures is harvested, future timber crops will be the property of the Crown; but the present crop is treated for most purposes as belonging to MacMillan Bloedel. The balance of the timber in the drainage, some 6 463 900 cubic metres, remains publicly owned.

The presence of the private timber in the valley suggests that the Ministry of Forests and MacMillan Bloedel Ltd.must negotiate equitable settlement for the company's private property rights affected by the Ministry's adoption of certain recommendations in this report, such as the establishment of a recreation site surrounding the head of Nahmint Lake.

2.10.3 Potential forest growth

The good quality forest soils of the valley, coupled with temperate summers and warm, wet winters,make the valley an ideal area for growing high-volume, high quality forests. The amount of wood fibre a given area of land can grow in one year is termed the mean annual increment (MAI). Tree Farm Licence 44's Alberni -West Working Circle, of which the valley is a major portion, produces an M.A.I. of 7.5 cubic metres. This means that on average the forests there grow at a rate of 7.5 cubic metres per hectare, per year.

The productive capacity of the Nahmint ranks it among the top five per cent of all lands in B.C. currently available for forest production. This is evident in the lower Nahmint where Douglas fir, red cedar, western hemlock, amabalis fir and grand fir trees planted in 1979/80 have reached six metres in height in just over 10 years. The Nahmint ranks among the best timber producing areas in Canada.

2.11 Nahmint Lake: physical description and water quality:

Nahmint Lake lies almost exactly at the mid-point of the narrow U-shaped Nahmint Valley. Its dimensions are approximately as follows:

Surface area:	710 hectares
Length	8 kilometres
Width	500 to 1200 metres
Depth	
maximum:	120 metres
average:	65 to 80 metres
Littoral area:	less than 10 percent of surface area
Water clarity	very clear
pH	7.3 - 7.4
(pH of Vancouver Island lakes is typically 7.0)	
Total dissolved solids	38 parts per million (ppm)
Dissolved Oxygen	19.3 ppm
Dissolved Nitrogen	0.06 ppm
Dissolved Phosphorus	0.003 ppm

The lake is valued for its recreational potential and supports a fishery on steelhead, cutthroat trout and Dolly Varden char.

Ministry of Environment surveys, completed in the summer of 1990, show that the lake is oligotrophic and therefore ideally suited for salmonid (salmon, trout and char) production. These parameters are, in general, within the range of other undisturbed Vancouver Island lakes (Appendix A.4).

Table 2: Timber Area summary[1] - Nahmint Valley, 1989

	Schedule "A"		Schedule "B"	
Class of type	Private Lands	Timber Licences	Crown	Total
	Hectares			
1. Productive forest land				
a) Mature coniferous				
• Accessible	25	3 228	9 064	12 317
• Inaccessible			112	112
Total mature coniferous	25	3 228	9 176	12 429
b) Immature coniferous				
• Accessible	95	458	1 497	2 050
Age: 1-10 years		453	428	881
11-20			274	274
21-30				
31-40			6	6
41-50			58	58
51-60	7	2	678	687
61-70	26	3	53	82
71-80			62	62
81-90				
91-100				
101+				
• Inaccessible			5	5
Total immature coniferous	95	458	1 502	2 055
c) Immature deciduous	18	2	61	81
Age: 1-10 years				
11-20				
21-30				
31-40				
41-50	18	2	47	67
51+	14	14		
Total immature deciduous	18	2	61	81
d) **Mature deciduous**				
e) **Not Satisfactorily Restocked***		361	244	605
Total productive forest land	**138**	**4 049**	**10 983**	**15 170**
2. Non-productive (NP) forest land				
Scrub, NP	0	88	1 521	1 609
3. Not suited for forests				
Alpine, rock, water, swamp	0	63	2 513	2 576
Industrial roads, Rights of Way		83	91	174
4. Total Nahmint drainage	**138**	**4 283**	**15 108**	**19 529**

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1. Inventory date: December 31, 1989

* Not Satisfactorily Restocked in this case refers to land that has recently been harvested but which has not yet been reforested as per the approved silviculture prescription (i.e. the scheduled time period for natural seeding from surrounding stands may still be in effect).

3.0 Resource utilization

3.1 Mine development

Two mineral claims were recorded with the Ministry of Energy,Mines and Petroleum Resources April 3, 1990. The location of these claims (Figure 2) in the vicinity of what is locally referred to as Blackie's Beach on Nahmint Lake, places a portion of one claim within the proposed recreation reserve and in potential conflict with the recreational values in the vicinity. It is essential that development work performed on these or future claims in the valley conforms to the principles and standards implicit in this plan.

3.2 Trapping

There is one registered trapline in the Nahmint Valley. The Ministry of Environment has recorded fur returns from the line for the 1986/87 and 1988/89 trapping seasons.

Mr. Miller, the licensed trapper, emphasized during telephone discussions with the chairman of the review team, that rapid removal of the natural forest cover in the Nahmint Valley could be devastating to the valley's furbearers, particularly the Pine Marten which have been his principal quarry to date.

Mr. Miller also reported that although trapping is not his principal source of income, his trapline represents a considerable investment of his time and money and he is concerned that the operation may not be viable in the future.

See Section 4.2.3 for a discussion of Pine Marten habitat and Sections 4.8, 4.9,and 4.10 for discussion of proposed future integrated resource use planning.

3.3 Recreation use

Prior to 1975, recreational use of the Nahmint Valley was largely confined to visits by anglers who chose to fly or hike into the valley. During the 1980s, as road access improved, the number of visitors increased.

In 1986, 30 percent of Vancouver Island's licensed freshwater anglers were surveyed. The results indicated that some 125 angler-days were spent in the Nahmint Valley. More recent survey results are not available, but observers note an apparent increase in total angling effort over the 1986 level as a result of improved road access to the mid and upper valley and improved small boat launching opportunities at Nahmint Lake.

Hunters, hikers, campers, swimmers and boaters also make extensive use of the valley. Such use is expected to increase as road and trail access improves and more recreation sites are developed throughout the valley.

3.4 Timber harvesting

Logging within the Nahmint drainage dates back to the late 1920s when Alberni Pacific Lumber developed a railroad logging operation on the north side of the lower Nahmint River, which reached from the Alberni Canal to just below Nahmint Lake (Figure 3). This operation was discontinued in 1932 after the logging camp burned down. No further logging occurred in the drainage until the mid 1970s when the 'Canal Mainline' road was built down the Alberni Canal from Macktush Creek, and into the drainage from Nahmint Bay. During this period there was logging activity in the lower Nahmint, which then moved in the early 1980s to the Kanyon Creek area. During the mid 1980s the road along the east side of Nahmint Lake was constructed, allowing access into the region above Nahmint Lake. Recently, mainline road construction has continued west from the head of Nahmint Lake and eastward along the north side of the upper Nahmint River.

MacMillan Bloedel currently harvests between 120 000 and 125 000 cubic metres of timber from the valley annually. Most of the harvesting takes place during the fall and winter months when the valley offers relatively snow-free logging opportunities. (See also Section 4.4.)

Information Note

Detailed logging and road building plans are contained in the Five Year Development Plans, which are updated annually. The Five Year Plan for Sproat Lake Division (which includes the Nahmint Valley) will be advertised in local newspapers in April 1991 and made available for public viewing at Port Alberni, Duncan and Victoria in mid-May.

3.5 Use of the Nahmint Valley by native people

The Nahmint Valley has been an important source of fish, game, and forest resources for local native people for several hundred years. In 1916, commissioners appointed by the provincial government noted the importance of Kleykleyhous Reserve #5 to the Ucluelet band as a fishing and trapping base[1]. The band reports that the Nahmint continues to be an important source of food fish and wildlife resources for their people[2].

Archeological records available to the Ministry of Forests indicate that there is an archeological site on the south side of Nahmint Bay. The site is identified as a 'sub-surface deposit.' No development is contemplated in the vicinity of the site. (See Sections 4.8.1 and 4.9.1 for suggestions about the involvement of local native people in future integrated resource management in the Nahmint.)

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1. McKenna-McBride Royal Commission on Indian Affairs for the Province of British Columbia, 1916.
2. Personal communication, N. May, Director, Natural Resource Management, B.C. Ministry of Native Affairs, 1991.

Table 3: Timber Volume summary[1] - Nahmint Valley, 1989

	Close utilization volume[2]		Thousands of cubic metres		
	Schedule A		Schedule B		
Species	Private Lands	Timber Licences	Crown	Total	Per cent of each species
Douglas-fir	9.7	700.5	923.5	1 633.7	17.9
White pine	0.1	21.2	60.8	82.1	0.9
Cedar	4.6	616.3	881.4	1 502.3	16.5
Yellow cypress		106.9	504.6	611.5	6.7
Spruce		12.3	0.2	12.5	0.2
Hemlock	11.5	793.1	2 344.0	3 148.6	34.4
Balsam	0.2	375.7	1 745.3	2 121.2	23.2
Lodgepole pine					
Deciduous		13.3	4.1	17.4	0.2
Total Volume	**26.1**	**2 639.3**	**6 463.9**	**9 129.3**	**100**
Hectares	**25**	**3 228**	**9 064**	**12 317**	

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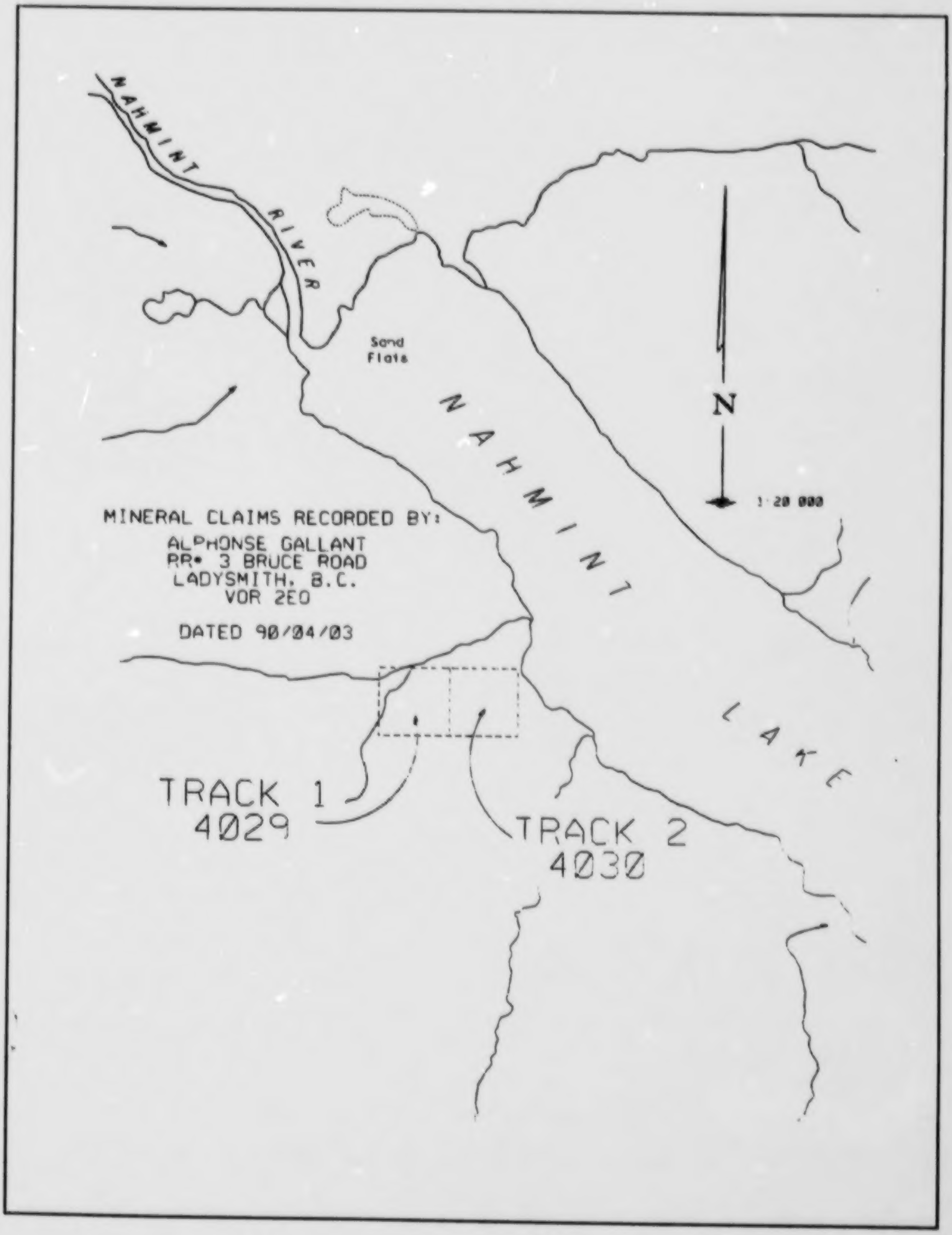
1. Inventory date: December 31, 1989.
2. Basis for inclusion: Accessible mature coniferous stands; live and dead recoverable.

Utilization standards:
Minimum d.b.h. — 23 cm
Top d.i.b. — 15 cm
Stump height — 30 cm

Figure 2 Mineral claims


NAHMINT RIVER
Sand Flats
NAHMINT LAKE
N
1:20 000
MINERAL CLAIMS RECORDED BY:
ALPHONSE GALLANT
RR• 3 BRUCE ROAD
LADYSMITH, B.C.
V0R 2E0
DATED 90/04/03
TRACK 1
4029
TRACK 2
4030

4.0 Resource management

4.1 Fish

The Nahmint River watershed supports five species of anadromous salmon, two species of anadromous trout, as well as resident trout and char. The main species of interest in the Nahmint are chinook salmon *(Oncorhynchus tshawytscha)*, coho salmon *(O. kisutch)*, chum salmon *(O. Keta)* and winter and summer steelhead *(O. Mykiss)*. Other fish species present include coastal cutthroat trout *(O. clarki)*, Dolly Varden char *(Salvalinus malma)* and kokanee *(O. nerka)*. The latter two are confined to the lake and upper watershed.

The distribution of anadromous fish within the watershed is influenced by a four-meter-high cascade located in the Nahmint Canyon, 4.8 km above salt water. Salmon, sea-run cutthroat and winter steelhead are unable to negotiate the barrier and are only found in the lower portion of the river. Summer steelhead navigate the falls and proceed through the lake into the 12 to 15 km of steelhead habitat in the upper river.

4.1.1 Salmon and steelhead run timing

The chinook, coho and chum salmon spawning migration occurs from October through December (Table 4). Winter steelhead enter the river from December through March, with peak spawning taking place in the first half of March.

Summer steelhead, on the other hand, spend up to 10 months in fresh water before they spawn. The majority enter the river from April through June, and proceed upstream into the lake and deep pools in the upper river where they hold-over for the summer and early fall. When water levels in the river increase with the fall rains, the fish in the lake then move upstream or downstream. Spawning of summer fish tends to be in January or February.

4.1.2 Natural versus artificial enhancement

The wild steelhead of Nahmint present a complex management challenge. Steelhead alone negotiate the barrier cascade in the canyon of the lower Nahmint, and even some of their number may not succeed in doing so.

Fisheries managers have considered removing the barrier to improve access for salmon as well as steelhead. They have chosen not to do so yet, primarily because of the potential impact salmon may have on steelhead in the upper drainage. Coho salmon in particular, are very aggressive. Their strong territorial behaviour and their superior numbers could drive steelhead out of spawning and rearing habitat essential to the trout's survival. Further research is required to determine the interaction between these species before a decision is made to remove the barrier on the lower Nahmint.

The Nahmint steelhead stocks will therefore be enhanced through efforts to improve their critical spawning and rearing habitat.

Information Note

In September 1990, Ministry of Environment staff coordinated a volunteer project to improve steelhead spawning habitat in the upper Nahmint. They involved workers from MacMillan Bloedel's Sproat Lake Division, local contractors, members of the Canadian Forces based at Comox, volunteers from Nuu-Chah-Nulth youth, the Ucluelet Indian Band, and the Port Alberni-based Share Our Resources group. Gravel was placed in a pre-determined location in the river with the aid of a Chinook helicopter from Canadian Forces Base Comox.

Table 4: Timing of salmon and steelhead migration into the Nahmint River

Species	Arrival	Peak	End
Chinook salmon	October	mid-October	November
Coho salmon	late October	November	December
Chum salmon	mid-October	end November	December
Winter steelhead	mid-December	February-March	late March
Summer steelhead[1]	mid-April	May-June	March

1. **Summer steelhead remain in fresh water from April through March.**

Figure 3 Area logged before 1932

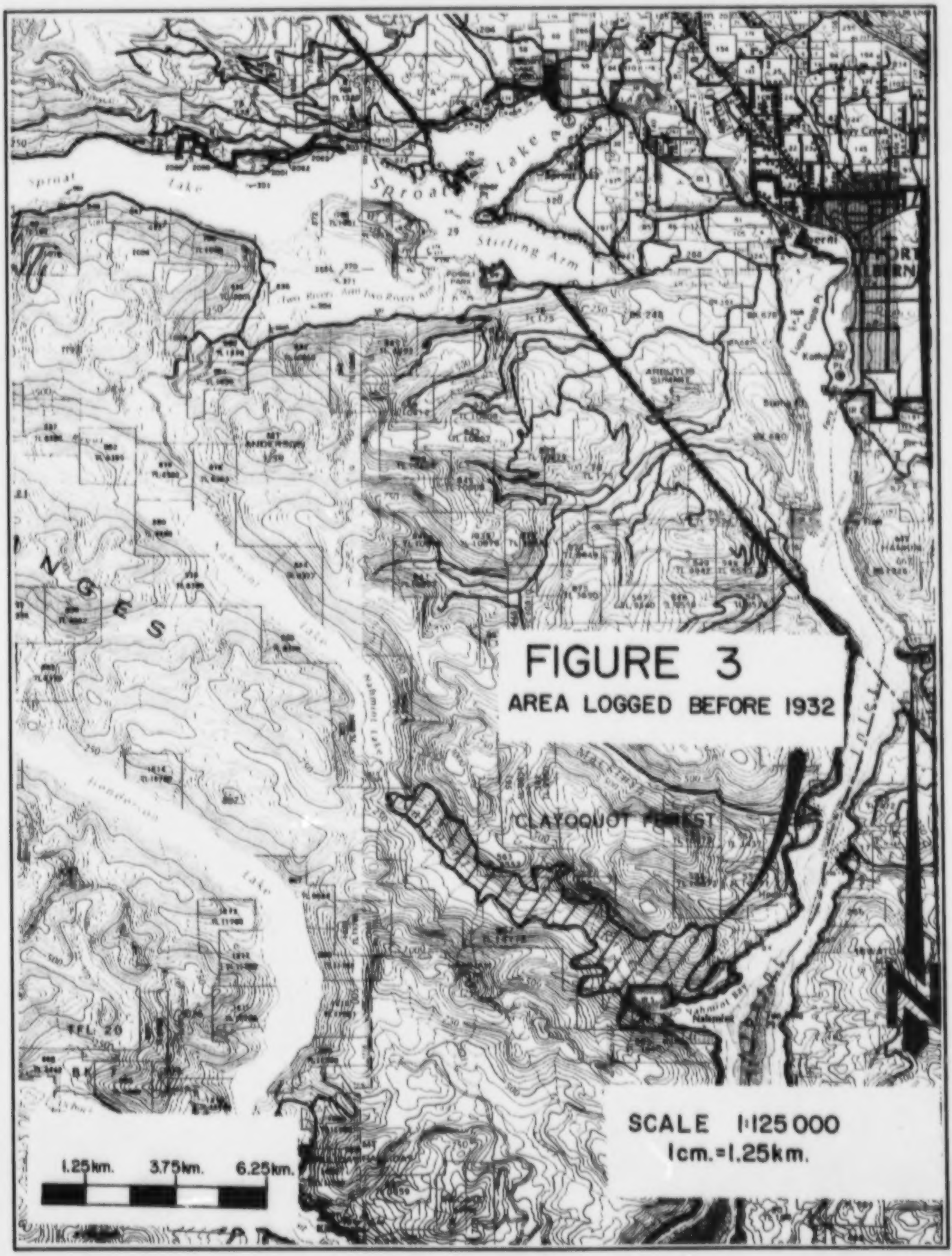
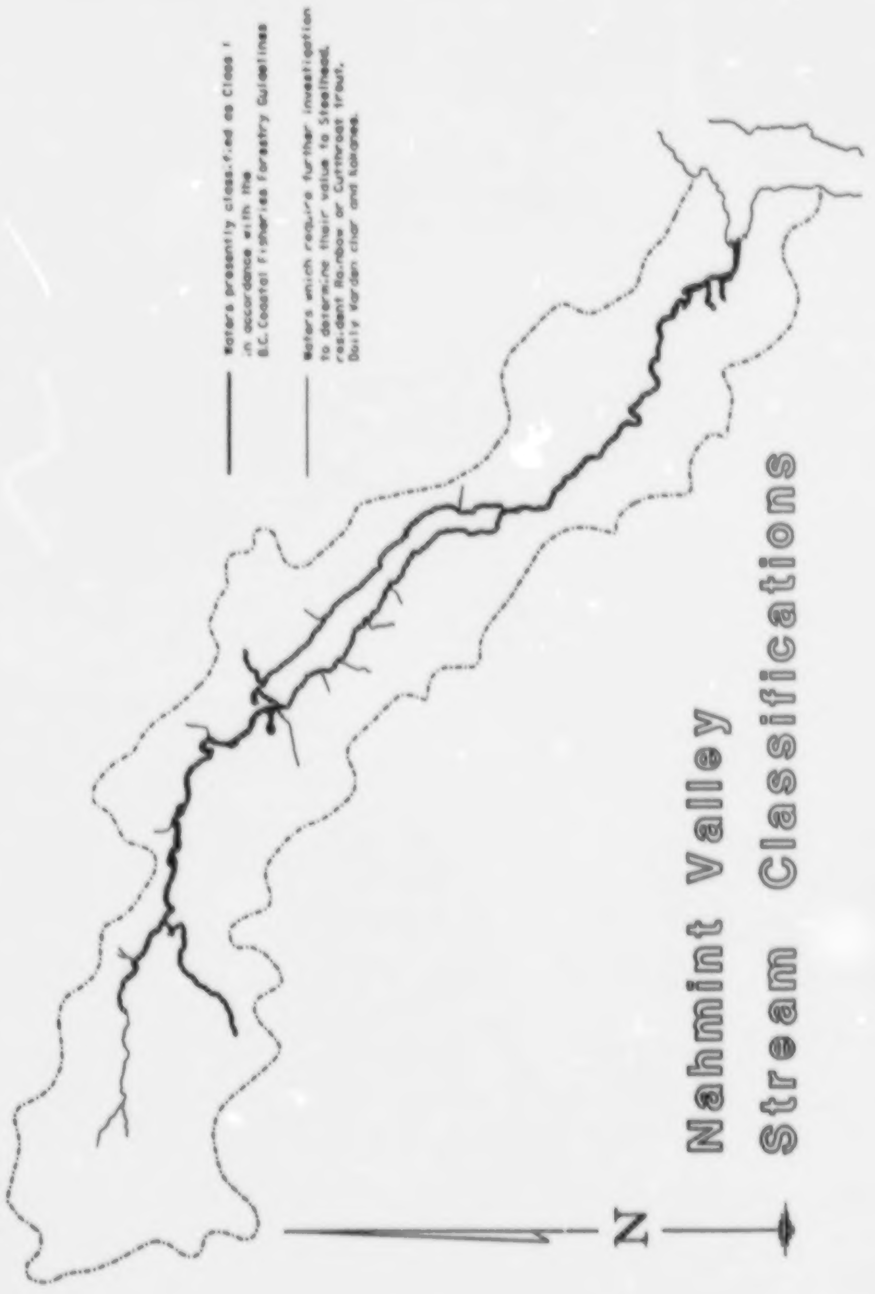

Sproat Lake
Stirling Arm
Arbutus Summit
Nahmint Lake
Henderson Lake
Inlet
FIGURE 3
AREA LOGGED BEFORE 1932
CLAYOQUOT FOREST
TFL 20
SCALE 1:125 000
1cm.=1.25km.
1.25km.
3.75km.
6.25km.

Figure 4 Nahmint Valley stream classifications


Waters presently classified as Class I
in accordance with the
B.C. Coastal Fisheries Forestry Guidelines
Waters which require further investigation
to determine their value to Steelhead,
resident Rainbow or Cutthroat trout,
Dolly Varden char and Kokanee.
N
Nahmint Valley
Stream Classifications

4.1.3 Quality fishing experience

To sustain the run of wild steelhead, the Ministry of Environment has instituted a catch-and-release-only regulation for all Nahmint rainbow trout over 50 centimetres in length. The Nahmint river upstream of Nahmint Lake will be designated as a fly fishing-only stream to improve the quality of the valley's angling experiences. In addition, a maximum 15 horsepower restriction will be placed on motorboats using Nahmint Lake. Electric motors only will be permitted on boats using Gracie Lake.

4.1.4 Fisheries protection corridors

The review team generally agrees with the many people who advocate that the natural forest should be left undisturbed along streamside and lakeshore areas throughout the Nahmint Valley. Some 80 per cent of the life forms in a watershed are found within the riparian habitat[1].

Resource managers have learned that streamside corridors of natural forest can be destroyed by the effects of wind. Unless such corridors are designed thoughtfully and the ground conditions are suitable, trees left with the best of intentions can blow down.

The history of natural blowdown in the Nahmint Valley is relatively light. This evidence, coupled with the presence of suitable stand components in many areas, indicates that it should be possible to maintain the streamside forest in a natural state at most locations in the valley.

The Review Team proposes therefore that resource managers plan to establish and maintain corridors of natural forest along all lakeshores and on both sides of all stream reaches in the drainage that are classified as Class 1 and 2 waters according to the B.C. Coastal Fisheries/Forestry Guidelines[2] (Figure 4). The corridors have been labelled fisheries protection corridors. These will comprise three distinct zones: (Figure 5)

- the fisheries sensitive zone immediately next to the stream or waterbody;
- an additional 60-metre-wide preservation zone of undisturbed natural forest; and,
- a 30-metre-wide buffer zone in which the taller trees are selectively removed to reduce potential windthrow and create a gradual transition between cutover areas and streamside timber.

4.1.4.1 Corridor functions

Fisheries protection corridors have at least four equally important functions:

- to protect the instream ecosystems of the Nahmint valley;
- to provide a visual screen to maintain the natural quality of stream and lakeshore settings for fishermen and other recreationists;
- to maintain important riparian habitat in an undisturbed state, thereby contributing to overall biodiversity of the watershed; and,
- to provide a physical barrier between logged areas and the streamside environment.

The protection corridors will shield waterbodies from runaway logs, rocks or debris that may slide downslope. The corridors will not act as filters to remove soil and sediment from water. Once sediment is suspended in flowing water it is carried through streamside buffers via rivulets and small creek channels. Waterborne sediment will be minimized at its source by maintaining high standards for road construction and maintenance (Section 4.5).

In October 1990, Ministry of Environment fisheries managers conducted field tests at various locations along the Nahmint River to gauge the depth of streamside forest necessary to screen adjacent logging operations from view. They determined that, although the minimum depth required to provide an effective screen varies according to the density of the forest cover and the nature of the topography a depth of 50 metres is sufficient. However, the review team proposes increasing the distance to 60 metres in order to provide additional certainty that the visual screening is effective. The actual boundaries of the preservation zone must be determined by joint assessment in the field.

The committee also recommends that a 30 metre-wide buffer be established outside the upland edge of each 60-metre streamside preservation zone, to reduce the potential for windthrow and to enhance utilization by wildlife. Within the buffer zone, up to 10 per cent of the trees may be selectively logged to leave a feathered edge between the preservation zone and adjacent logging. The fisheries management zone boundaries will vary to allow the buffer zone to be located in stands with sufficient variation in tree heights to achieve a feathered boundary. At certain locations it may be necessary to adjust the planned width of the fisheries protection corridors to less than 60 metres in order to accommodate local terrain features or deal with other logical considerations. In each case where significant reduction in corridor width is necessary, the matter will be brought to the attention of the proposed Nahmint Watershed Follow-up Committee (Section 4.8).

Today's anglers clearly consider that the quality of the outdoor experience is of equal importance to fishing success. The Nahmint Valley is one of the best wild summer steelhead streams on Vancouver Island. It deserves careful management to maintain its quality fishing experiences.

The 1975 Nahmint Study recommended that the *Decision Making Procedure for Streamside Management on Vancouver Island* by M.. Moore should be applied on all areas where harvesting adjacent to fish-bearing

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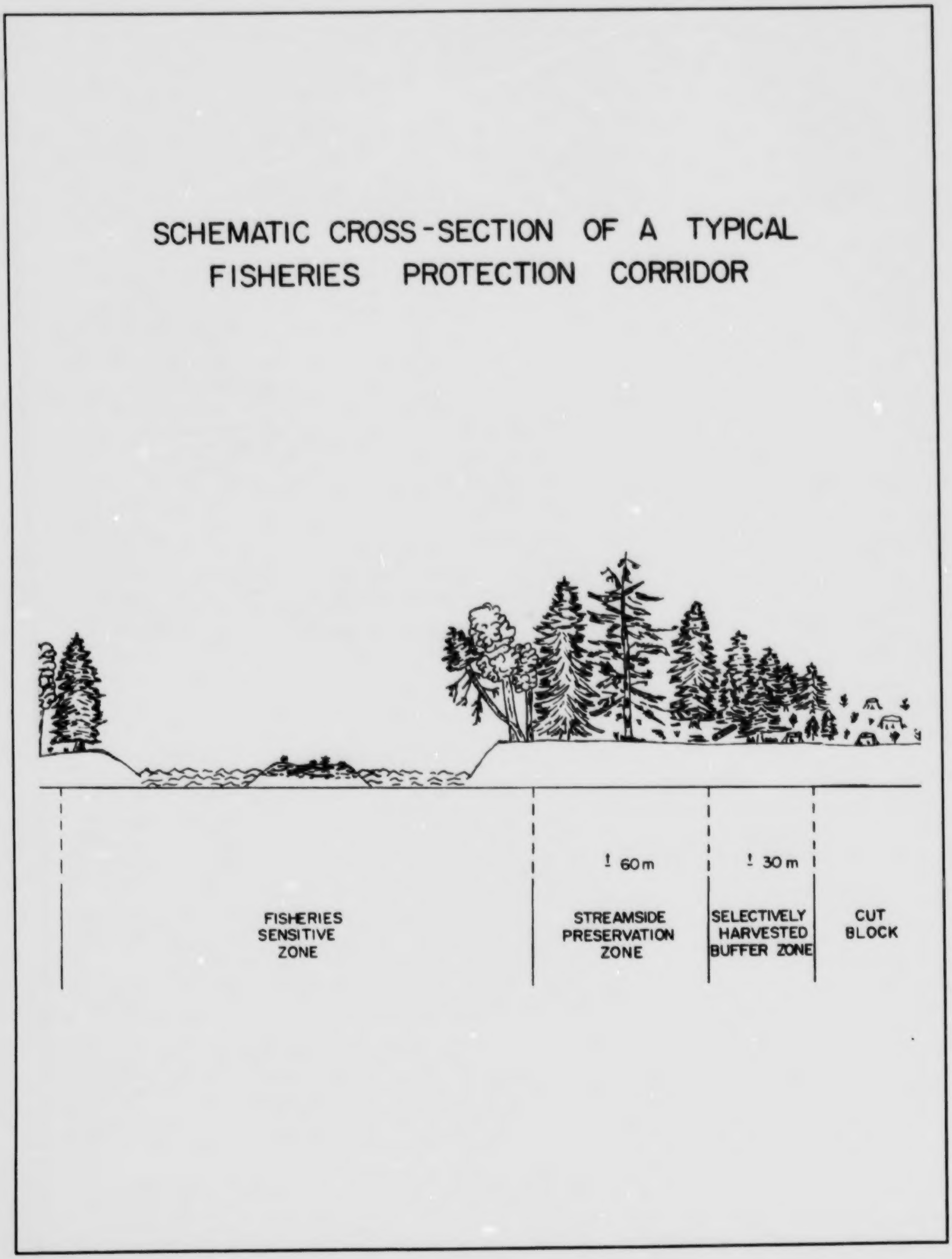
1. Thomas J.W., Maser C., and Roderick J.E., Riparian Zones, Their Importance to Wildlife and Their Management, Reno Wildlife Workshop, Reno, Nevada, 1977.
2. British Columbia Coastal Fisheries Forestry Guidelines, (Appendix A.2).

Figure 5 Schematic cross-section of fisheries protection corridor


SCHEMATIC CROSS-SECTION OF A TYPICAL FISHERIES PROTECTION CORRIDOR
± 60m
± 30m
FISHERIES SENSITIVE ZONE
STREAMSIDE PRESERVATION ZONE
SELECTIVELY HARVESTED BUFFER ZONE
CUT BLOCK

streams is planned. If the fisheries protection corridors proposed in this report are accepted, they will, in conjunction with the *B.C. Coastal Fisheries Forestry Guidelines*, supersede the requirement for use of Moore's Decision Making Procedure. Reference to that document should not be required in future resource management in the valley.

4.2 Wildlife habitat

As outlined in section 2.6, the Nahmint Valley supports a representative cross-section of wildlife similar to that of many central Vancouver Island valleys. In the Nahmint, the broad goal of natural resource managers is also similar to that for other drainages and that is to maintain sufficient habitat to support healthy, viable populations of each wildlife species native to the valley.

4.2.1 Background

In 1975, the authors of the *Nahmint Study* examined the deep, old forests of the Nahmint, noted the relative scarcity of game animals and concluded that wildlife values were present in the valley, but were not significant. This is no longer the case. For a variety of reasons, harvesting of the valley's forests, coupled with recent wildlife transplants, have resulted in increased numbers of deer and elk.

Today's wildlife managers are concerned with much more than just making sure game animals are available to sportsmen, because today's British Columbians feel strongly that all wild plants, mammals, birds, reptiles, and aquatic species deserve proper conservation. Nor is the sportsman any longer considered the only 'consumer' of wildlife. Non-consumptive enjoyment of wildlife, such as viewing and studying birds and animals as well as "just knowing that wildlife is out there", are equally important to today's citizen.

Timber harvesting creates patches of forest of different ages. Certain animal species such as deer, elk, and upland game birds frequently prosper under such conditions, provided that adequate critical, seasonal habitat is available to them. On the other hand, certain other bird and animal species, are best adapted to mid-to-late successional or climax-forest ecosystems (old-growth forests) and rarely make use of freshly clearcut areas. It is possible to extirpate such deep-forest dwellers from an area if sufficient habitat is not retained to meet their needs.

Although natural resource managers are concerned with all native species in the Nahmint, the re-introduction of Roosevelt elk into the valley and new information concerning Pine Marten habitat focus special attention on these two species.

4.2.2 Roosevelt elk

A native population of Roosevelt elk has historically been present in the Upper Nahmint Valley. The valley has particularly high-quality summer range on the north, east and west slopes of Nahmint Mountain. In the 1950s, a reported sighting of 20-25 elk was recorded (data on file, Ministry of Environment, Nanaimo B.C.). Populations apparently declined during the 1960s and/or 1970s due to unknown factors. During the 1980s, recorded evidence of elk in the Nahmint is confined to cast antlers, tracks of one or two animals (likely bulls) and several sightings of one or two cow elk. There was not thought to be a viable population of elk in the valley prior to two transplants into the Upper Nahmint in February of 1989.

The first of these two transplants consisted of three yearling male elk from the Qualicum area. The second successful introduction consisted of 11 elk of mixed sex and age, including six adult radio-collared cows from the White River on northern Vancouver Island. Three calves were born to this group in 1989, and six in 1990 bringing the total number of elk in the Upper Nahmint to 21 at the beginning of the winter of 1990/'91. These elk were intensively studied from February 1989 through December 1990 as part of the Integrated Wildlife-Intensive Forestry Research (IWIFR) Project. The goal of this portion of the research was to test a model of elk seasonal-range habitat selection patterns.

During the period of this study, the main herd spent the summer and fall seasons on higher elevation slide alder/mature conifer/riparian complex habitats up Beverly Creek, along the main stream of the Nahmint upstream of the Beverly Creek/Nahmint junction, and up the south fork of the Nahmint River. One of the radio-collared cows spent the summer near the height of land to Clements Creek above View Main during the first year, and then joined the main herd for the second summer. This same cow spent much of the time during the winters of 1989 and 1990 near the head of the lake in the mature conifer/riparian complex which appears to be one of the highest-quality elk winter ranges in the Upper Nahmint. The remaining elk spent the first winter along the main stream of the Nahmint, upstream of the Beverly Creek/Nahmint junction.

Information Note

In late December, 1990, four of the five adult cows with functioning radio-collars appeared to be migrating towards the winter range at the head of the lake, when they were illegally shot a short distance downstream of the Headache Creek/Nahmint junction. This poaching incident is currently under intensive investigation and public concern has been considerable. More than $26,000 has been offered as a reward by corporate and individual citizens for the arrest and conviction of the individual(s) responsible. It is unknown how many elk were killed in addition to the four radio-collared cows. The Ministry y of Environment will probably wait until next year to determine survival and productivity of the remaining herd before considering whether it is necessary to undertake an additional transplant to bring the herd up to a viable population level.

4.2.3 Pine marten habitat

It has been documented [1] that Pine Marten avoid recently clearcut or large fire-killed areas. The primary reason seems to be that open areas expose the marten to their predators, particularly eagles and large owls.

As-yet-unpublished research[2] conducted in the Nanaimo River watershed on Vancouver Island, indicates that marten make frequent use of 10 to 40 year old second-growth areas, provided that the vegetative canopy is thick enough to offer security from predators. It has not yet been determined whether the marten prefer such second-growth cover or use it out of necessity because of the preponderance of second-growth stands in the Nanaimo River drainage. It remains evident that the animals use second growth forest successfully. For example, one of the radio-collared marten screened in the Nanaimo River study denned up in an old debris pile, (now in a patch of alder and cottonwood), where loggers had once landed logs from a high-lead setting.[3]

Although marten avoid large areas of exposed ground and also do not make good use of small isolated patches of old timber, their ability to use greened-up second growth indicates that they have a viable future in the Nahmint. This is made more certain by the old-growth areas proposed in this report, for inclusion in biodiversity corridors, recreation areas and fisheries protection zones (see maps 1 and 2 in pocket). In addition, the proposed smaller average cutblock size, dispersed harvesting pattern and extended green-up periods in certain parts of the valley should reduce fragmentation and isolation of important furbearer habitat.

The Nahmint watershed offers excellent potential as a study area for future research on Pine Marten habitat and management techniques, and is presently under consideration by the Ministry of Environment for that purpose.

4.2.4 Marbled murrelet habitat

In recent months increasing attention has been drawn to the habitat requirements of the Marbled Murrelet (*Brachyramphus marmoratus*), a small sea bird which, although seldom observed, seems to prefer to nest in the canopy of old growth coastal forest .

Although none of the members of the Review Team are aware of any sightings of Marbled Murrelet in the Nahmint Valley, the birds are known to frequent nearby Barclay Sound waters in some abundance and are also known to travel considerable distance inland to nest. It is logical that the Nahmint Valley could provide nest sites for this species.

A four-person team of biologists is presently investigating the nesting habitat requirements of the murrelet. They have not completed their study, but their preliminary recommendations[4] suggest that streamside corridors combined with substantial amounts of old growth reaching from valley bottom to heights of land will serve to provide sufficient potential nest sites.

The present areas of old-growth forest in the Nahmint should be more than adequate to meet the immediate needs of any of murrelets which may now nest in the valley. Once the murrelet study's findings are published, resource managers should review management plans for the Nahmint to ensure that sufficient habitat will be available to the birds over the long term.

4.2.5 Biodiversity corridors (Map 2 in pocket)

4.2.5.1 Designated firebreaks

The 1975 study depicted and described an interconnecting system of designated firebreaks. The firebreaks in the Nahmint are for the most part still intact and are very similar to examples found in many coastal valleys. Designated firebreaks consist of bands of mature or advanced immature timber, usually 200 metres or more in width and at least 30 metres in height. They are strategically located to block potential wildfire from rapidly engulfing a whole valley, or spreading from one locality to another. Often, in addition to their fire control function, firebreaks serve the needs of wildlife by providing important habitat.

4.2.5.2 Shift to biodiversity

Today's forest managers rely less upon designated firebreaks because they now use a wide range of practices to limit forest fuels and keep the risk of uncontrolled fire to a minimum. (See also Section 4.4.7.3). In the Nahmint Valley, improved fire management practices allow managers to shift the primary purpose of the designated natural fuel breaks from controlling wildfire to maintaining overall biodiversity and providing important wildlife habitat. Biodiversity corridors are principally intended as wildlife habitats comprised of both old-growth and advanced second-growth of varying age classes. These habitats will serve to maintain overall biological diversity throughout the valley by harbouring a wide range of plant and animal species indigenous to the area. There are some advantages to be gained from this shift in emphasis:

- corridors can now be located so as to meet the needs of wildlife as the first priority;
- corridors can be located to include a variety of species, ecosystems and habitat types;

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[1] *Wildlife Furbearer Management and Conservation in North America*, Snyder, Ontario Ministry of Natural Resources, 1989.
[2] *Habitat Use Patterns of Marten (Martes americana) in a Coastal Forest*, J. Baker, Simon Fraser University (Unpub.).
[3] Personal communication, K. Morrison, Ministry of Environment, Fish & Wildlife, Nanaimo Region, 1990.
[4] *Interim recommendations to protect Marbled Murrelet nesting habitat*, Dale Seip, Ministry of Forests; Jean-Pierre Savard and Garru Kaiser, Canadian Wildlife Service; and Bill Munro, Ministry of Environment, December 10, 1990.

- the size, shape and duration of corridors can be established primarily upon the needs of all wildlife in the valley; and,
- corridors or portions of them can be relocated in response environmental change.

See section 7.7 for details regarding the management prescriptions for biodiversity corridors.

4.3 Recreation and landscapes

4.3.1 Forest recreation

4.3.1.1 Background

As discussed in Section 3.3, prior to 1975, recreational use of the mid and upper Nahmint valley was largely confined to those people who chose to fly or hike into Nahmint Lake to enjoy its spectacular angling opportunities amid its wilderness setting. Each summer many anglers also frequented Nahmint Bay at the river's mouth and the lower Nahmint River between Nahmint Lake and the estuary. The principal attraction remains the excellent salmon and steelhead fishing.

Over the past 15 years the forest road network has been extended into the valley, resulting in an increased number of visitors and change to the valley's wilderness character. Camping , picnicking, hiking and hunting have become very popular activities for visitors to the valley. The cold waters of Nahmint Lake limit the popularity of swimming at most lakeside locations except for the shallow, sandy beaches at the head of the lake.

Nahmint Lake and its vicinity offers more recreational opportunities and presents more visually sensitive landscapes than any other portion of the drainage. This was recognized in the 1975 report where (in paragraphs K and M of section 6.2), the authors specified the size and shape of clearcuts in the vicinity of the lake, in relation to the rest of the valley.

In 1980, the section of the report dealing with landscapes was revised and reference to specific opening size was deleted. Forest managers were referred to the newly available *Forest Landscape Handbook*[1] and the principles contained in two visual impact studies[2] that had been prepared as part of the 1975 study.

During the late 1970s, in order to reduce operating costs, MacMillan Bloedel requested that several constraints included in the 1975 report be amended. These included opening size and green-up period. The request was reviewed by the participants in the 1975 Nahmint Integrated Resource Study and in 1979 the Ministry of Forests approved changes to the study that granted increased flexibility to MacMillan Bloedel (Appendix A.1). One result was that the cutblock near the head of Nahmint Lake was permitted to increase beyond the 1975 standards.

By late 1981 the forest industry found itself in the deepest economic recession since the Great Depression of the 1930s. The government of the day instructed the Ministry of Forests to grant special flexibility in forest harvesting development in order to reduce the unprecedented dollar losses being experienced by the industry. This influence, coupled with windthrow which occurred in a planned leave strip, contributed to the size of the clearcut area near the north west end of Nahmint Lake.

Rightly or wrongly, both Forest Service and industry managers perceived that the Nahmint was visited by fewer than 1,000 recreationists each year and most visitors were local residents who expect to encounter large clearcuts when travelling through local forests.

During the 1980s, landscape concerns in Nahmint were addressed, but not with the same priority as areas visible from local communities or major travel corridors.

4.3.2 Recreation and landscape inventory (Figures 6 and 7)

In 1990, MacMillan Bloedel's Sproat Lake Woodlands Division completed a recreation and landscape inventory[3] to identify the recreational potential of the area and map the visually-sensitive areas within the drainage. The inventory was a necessary first step in preparation of a recreation management plan for the valley, providing a body of factual information on which to base the direction and emphasis of future recreation management. The completed inventory identifies many areas in the valley which have both important recreational value and potential for development.. (See maps 4 and 5 in pocket).

The landscape inventory identifies those areas which are visually sensitive when viewed from the principal travel corridor along the mainline road through the length of the valley and over the Gracie Lake hill near the head of Nahmint Lake. Visual quality objectives for each sensitivity level are discussed in Section 6.1.5.

In their summary, Hignett and Benn describe its recreation potential as follows:

> The Nahmint Valley offers significant potential for high-quality recreation opportunities, although present recreation use levels appear to be relatively low. Road access, either along Sproat Lake or Alberni Inlet, is within one hour of Port Alberni. This round trip via a potentially very attractive recreation corridor makes the valley a desirable, recreational destination.

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1. *Forest Landscape Handbook*, Ministry of Forests, 1981.
2. *A Visual Impact Analysis Nahmint Valley*, prepared for the B.C. Forest Service by C. Shultz & Co. Ltd., November, 1975. *Nahmint Watershed Visual Impact Study*, R. Horner, B.C. Forest Service, September, 1975.
3. *Nahmint Valley Recreation Inventory and Landscape Assessment*, Hignett V. and Benn D., Juan de Fuca Environmental Consultants, Victoria, B.C, October, 1990. (May be viewed at MacMillan Bloedel Ltd. Sproat Lake Woodlands Division,

Figure 6 Areas of high landscape sensitivity

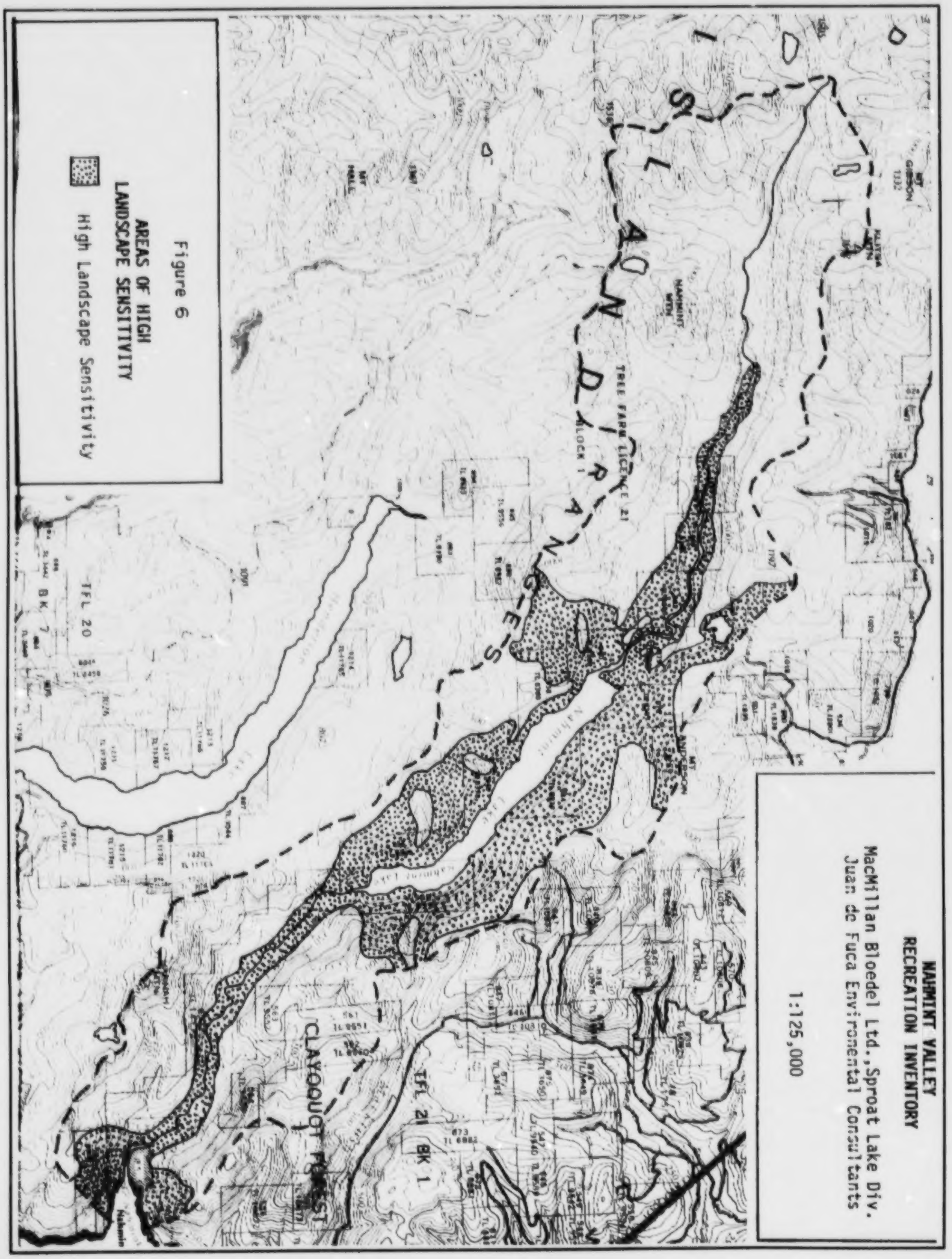


Figure 6
AREAS OF HIGH LANDSCAPE SENSITIVITY
▨ High Landscape Sensitivity
NAHMINT VALLEY RECREATION INVENTORY
MacMillan Bloedel Ltd., Sproat Lake Div.
Juan de Fuca Environmental Consultants
1:125,000
ISLAND RANGES
TREE FARM LICENCE 21 BLOCK 1
TFL 20 BK 7
TFL 21 BK 1
CLAYOQUOT FOREST
MT GIBSON
NAHMINT MTN
MT ANDERSON
Nahmint Lake

The areas of high recreational value include:

- Nahmint Bay and estuary;
- the upper and lower portions of the Nahmint River, with attractive gravel bar beaches and adjacent terraces of large, old-growth timber;
- Nahmint Lake and its varied shoreline with interspersed beaches;
- Gracie Lake; and,
- extensive alpine areas of the upper drainage.

Such landscape diversity provides a broad range of recreational activities in a semi-primitive and primitive recreational setting. Present and potential activities include :

- angling and hunting;
- vehicle access camping;
- wilderness tenting;
- boating in canoes, kayaks and small boats;
- landscape and wildlife viewing and photography;
- shoreline exploration of the lake and river with a focus on nature interpretation;
- hiking along the river and in the alpine areas;
- berry picking; and,
- pleasure driving and 4-wheel driving.

The relatively large portion of land that is of high visual sensitivity is due to the steep, uniform slopes of continuous coniferous forest that form the ridges on either side of Nahmint Lake.

Interview information collected for this study provides a similar range of opinions to that reported in the 1975 integrated resource study. That is, the user public appreciates the semi-wilderness setting of the valley and does not wish to see it developed for large-scale, intensive recreational use. Canoes, kayaks and small boats rather than power boats are preferred for the lake, and two or three small-to-moderate-size campsites are preferred to large campsite development.

The Recreation Opportunity Spectrum (ROS) classes in the Nahmint Valley range from primitive in the alpine areas of the upper valley and valley headwaters to roaded resource land in the valley bottom, where two-wheel-drive road access is available. The south shore of the lake, as well as the upper slopes and ridges on the north side, are dominantly semi primitive and non-motorized.

4.3.3 Recreation and landscape management in the Nahmint Lake vicinity

The recreation management goal for the Nahmint Lake portion of the valley will be to preserve the recreational experiences and opportunities that exist there now. Landscape management will aim at improving on previous practices to ensure that future harvesting impacts in the area reflect the current standards of the Vancouver Forest Region.

These goals will be accomplished by:

- preparing a recreation management plan by December 31, 1991, based upon the recently completed inventories;
- ensuring that harvesting practices and other measures to protect the identified recreation and landscape values are prescribed and followed;
- maintaining public access to all major parts of the valley, except during periods of extreme fire danger or where safety hazards prevail, such as near active logging operations; and,
- ensuring that recreational facilities and recreational trails are constructed to Ministry of Forests standards.

4.3.4 Circle tour

A well maintained system of gravel-surfaced industrial roads offers a scenic, 40-kilometre circle tour from the town of Port Alberni through the lower Nahmint Valley and back to Port Alberni. The route skirts portions of the Somass River estuary, Alberni Inlet, the lower Nahmint River, and Nahmint, Gracie, and Sproat lakes. Side roads and alternate routes offer access for launching skiffs and canoes on Nahmint Lake and Gracie Lake, as well as road access to the upper Nahmint River and Highway 4 at Sutton Pass. Several short side roads or trails lead to scenic viewpoints or stops of interest along the route. The road is open to recreational traffic year round, subject only to closure for snow accumulation, major maintenance and extreme fire hazard. Although off-highway trucks frequent the road during the fall and winter period, it is important that recreational access continue year round particularly during the spring, summer and early fall with as little disruption as possible.

If the circle tour were more fully developed, its present and potential campsites, picnic sites and trails to scenic features, may draw visitors from many south and mid-Vancouver Island centres, as well as tempt some visitors from more distant locations to extend their stay in the area.

It is clear that proper direction signs are needed before large numbers of people are invited to visit the Nahmint Valley via the circle tour route. In addition, informational and educational signs should be installed to assist visitors to better understand and enjoy the natural history of the area. One respondent suggested that a logging history display might be developed at a suitable location in the forest of the lower Nahmint Valley, where Alberni Pacific Logging Co. operated a railroad logging operation in the 1920s. (See section 4.6.4 for a discussion of the commercial tourism potential of the circle tour route).

Figure 7 Areas of high and very high recreation feature significance

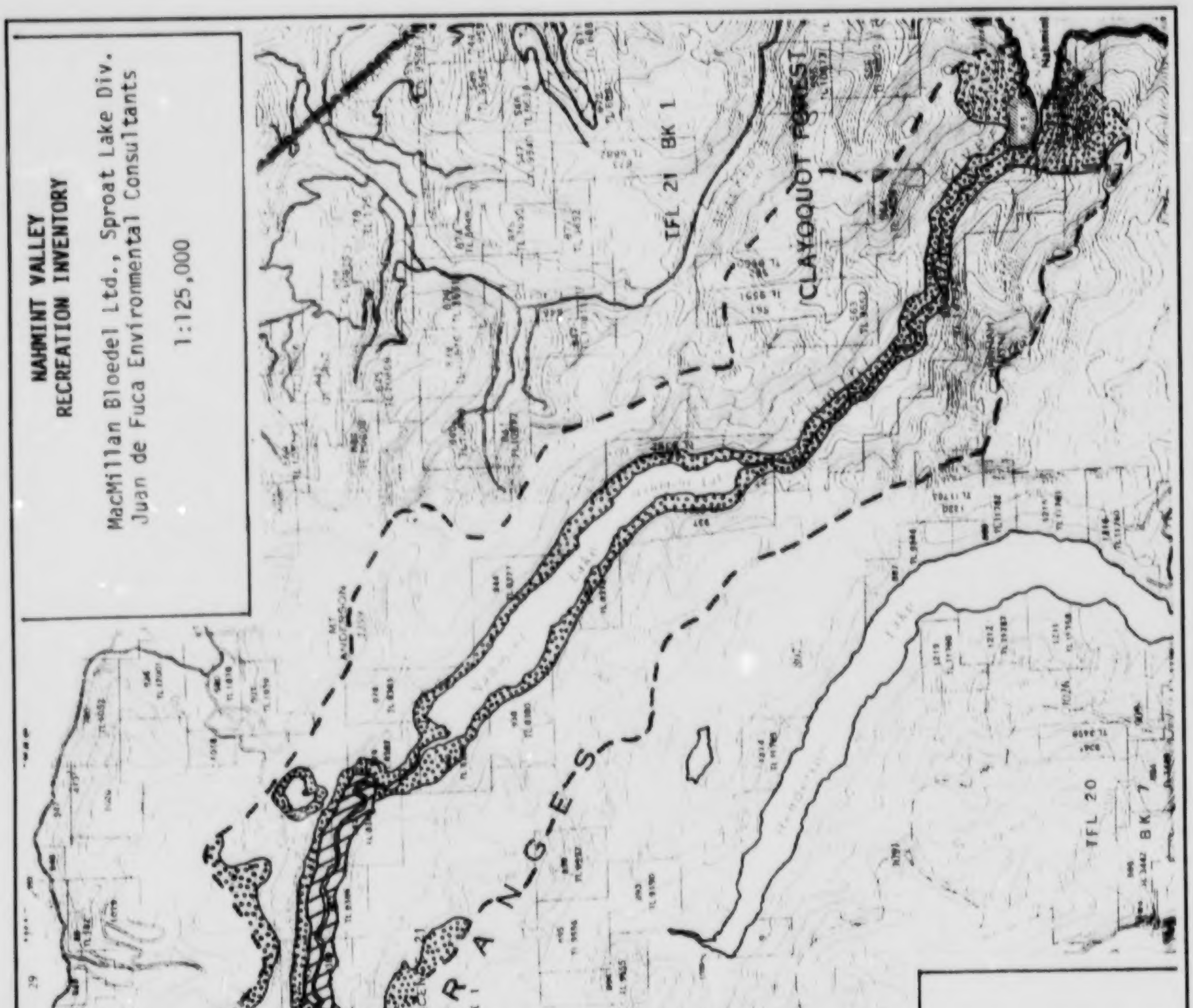
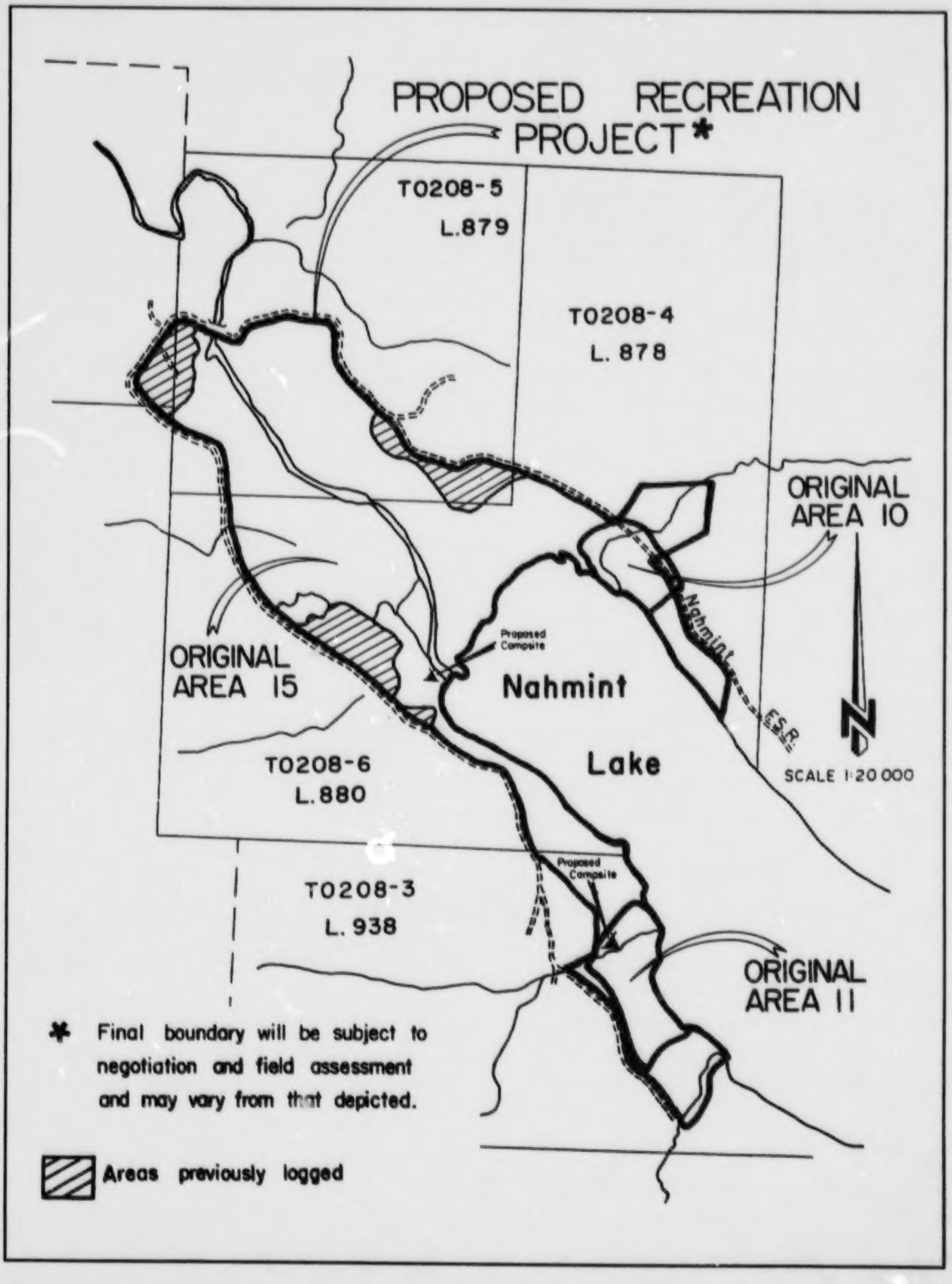

NAHMINT VALLEY
RECREATION INVENTORY
MacMillan Bloedel Ltd., Sproat Lake Div.
Juan de Fuca Environmental Consultants
1:125,000
Figure 7
AREAS OF VERY HIGH
AND HIGH RECREATION
FEATURE SIGNIFICANCE
▨ Very High Significance
▩ High Significance
MT GIBSON
1332
KLITSA MTN
MT ANDERSON
MT HALL
TFL 21 BK 1
CLAYOQUOT FOREST
TFL 20 BK 7
TREE FARM LICENCE 21
BLOCK 1
ISLAND RANGES

Figure 8 Proposed Nahmint lake recreation site



PROPOSED RECREATION PROJECT*
T0208-5
L.879
T0208-4
L. 878
ORIGINAL AREA 10
Nahmint
E.S.R.
Proposed Campsite
ORIGINAL AREA 15
Nahmint
Lake
SCALE 1:20 000
N
T0208-6
L.880
Proposed Campsite
T0208-3
L. 938
ORIGINAL AREA 11
* Final boundary will be subject to negotiation and field assessment and may vary from that depicted.
▨ Areas previously logged

4.3.5 Gibson-Klitsa wilderness study area

In 1989, both the B.C. Forest Service and MacMillan Bloedel Ltd. proposed that the Gibson-Klitsa plateau, and bordering alpine and sub-alpine forests in the upper Nahmint Valley should be added to a provincial list of candidate areas for wilderness study. Although the area ranks number one as a candidate for wilderness designation within the Port Alberni Forest District, it currently ranks 13th on the priority list for the Vancouver Forest Region as a whole.

At present, there is no trail from the Nahmint Valley to the alpine meadows of the Klitsa plateau, but a very steep, rugged trail does provide hiker access to the plateau, from the Taylor River Valley to the north.

It is likely that a trail will eventually provide access to the plateau from the head of the Nahmint Valley. The first priority for trail improvement funding should be the relocation and upgrading of the existing trail within the Taylor River Valley in order to make the route safer and more accessible to all users. Construction of a trail from the Nahmint Valley to the Klitsa plateau will not likely be completed for a few years because of Ministry of Forests budget priorities and the fact that road access to the head of the valley will not be completed for another two or three years (Appendix A.11).

4.3.6 Wildlife viewing

If accepted by the Forest Service, the recommended fisheries protection zones, biodiversity corridors and recreation reserves proposed in sections 4.1 and 4.2, in conjunction with the areas where harvesting takes place, should result in a considerable increase in the numbers of several species of wildlife in the valley. Such increases are now evident in those portions of the valley where logging has already occurred. Increased numbers of grouse, deer, bear, and cougar will afford anglers, hikers and other visitors more opportunity to observe such wildlife. The presence of the small herd of Roosevelt elk in the upper valley may also draw visitors.

4.3.7 Recreation plan

The next objective for resource managers is to complete a recreation management plan for the valley by December 31, 1991 (See Section 6.1.4).

4.3.8 Proposed Nahmint Lake recreation site (Figure 8)

The area surrounding the head of Nahmint Lake was identified in the 1975 study as containing the highest priority locations in the watershed for recreational development. MacMillan Bloedel Ltd. and the Ministry of Forests have reached agreement in principle that the area will be preserved for public recreation purposes.

The area also contains impressive stands of trees which will be evaluated as representative examples of old-growth. The Review Team proposes that the B.C. Ministry of Parks be invited to assess the area for its value to the provincial parks system. If the outcome of that assessment does not result in the area being established as a park, we suggest that the Ministry of Forests establish the area as a recreation site under Part 9 of the Forest Act.

4.3.9 Boat launch facilities

The authors of the 1975 Nahmint study recognized that most recreationists who visited Nahmint Lake came in search of a high-quality angling experience among natural surroundings. In their report they made two recommendations to control motorboats on the lake. The first was to restrict the motors of boats on the lake to 15 horsepower. The second was to construct the boat launch facility proposed for the head of the lake in such a manner that it would be unsuitable for launching large, powerful boats.

During the 1990 public involvement sessions, many persons told the Review Team that they favor the restriction on motor size proposed in the 1975 report. We agree with these sentiments. In 1989, MacMillan Bloedel constructed a short tanker access road to the river's edge near the northwest end of Nahmint Lake. This is the only point where convenient boat launching access to the water's edge exists at present. The review team proposes that this point should remain the only vehicle-accessible boat launching location for the foreseeable future.

This launching site is undeveloped at present, and due to the steep one-metre high bank at the water's edge, is suitable only for launching skiffs and canoes. The river's current at this point would scour away any gravel laid to provide a launching ramp. The team recommends that special attention should be given in the proposed recreation management plan to designing a facility that allows skiffs and canoes to be launched with ease and safety.

4.3.10 Private improvements

In 1975, the authors of the *Nahmint Watershed Integrated Resource Study* recommended that no long-term habitation, whether seasonal or permanent, should be permitted in the vicinity of Nahmint Lake (Appendix A.1 section 6.2 [Q] and 6.3 [A]). This recommendation was made to maintain the relatively few gravel beaches along the lakeshore in as natural a state as possible. Many of the people who attended public information sessions connected with the 1990 review voiced their agreement with this recommendation. The consensus of the review team is that such structures should not be encouraged, particularly in the vicinity of Nahmint Bay or Nahmint Lake (Section 6.6).

4.4 Forestry

The entire Nahmint drainage, with the exception of the Indian reserve on Alberni Inlet, falls within MacMillan Bloedel's Tree Farm Licence 44, and is managed by the company's Sproat Lake, Woodlands Division.

The Nahmint Valley comprises approximately 20 per cent of the productive forest land area available to Sproat Lake Division, but because other areas within the division were logged previously (notably the Ash Valley in the 1940s, 50s and 60s) nearly one third of the remaining volume of old-growth timber available to the division lies within the Nahmint drainage. The timber of the Nahmint Valley is therefore critical to Sproat Lake Division's future as a viable Woodlands operation — particularly during winter, when snow limits access to other areas.

Sproat Lake Division operates on a sustained yield basis as part of the Alberni West Working Circle within T.F.L. 44.[1] Even though the division as a whole is managed for a sustained yield of wood fibre, it should be clearly understood that individual drainages such as the Nahmint are not. Within the Nahmint Valley, harvesting will be periodic rather than continual over the forest rotation period.[2]

4.4.1 Future harvesting

Logging activity within the Nahmint will concentrate on old-growth until approximately 2010, after which a portion of the annual harvest will be taken from stands now growing on the old railway-logged areas which should then be suitable for harvest. The forest rotation period henceforth will average 80 years. The better growing sites should produce marketable crops more frequently (typically at 65 to 70 years), while stands on the poorer growing sites will take longer to reach optimum size.

4.4.2 Opening size and distribution

In future, logged openings will be smaller than some of those presently in evidence. Typically, their size will be in the 30-hectare range. Actual cutblock size will vary widely, but blocks in excess of 40 hectares will be the exception. The mainline logging roads in the valley will be constructed as quickly as is practical in order to disperse the annual harvest more widely than in the past. The logged openings will be located to maintain sufficient timber between them, to promote habitat diversity and to provide logical future harvesting units. Adequate green-up periods[3] will be maintained so that each logged opening is reforested sufficiently to meet its prescribed visual quality or biodiversity objectives, before logging of adjacent timber will be permitted.[4]

4.4.3 Long-reach yarding

Because some logging will occur on steep areas where road construction should be kept to a minimum, Sproat Lake Woodlands Division is currently investigating the re-introduction of long-reach cable yarding systems. At present the division is conducting operational trials with a Madill Model 122 swing yarder. In the near future, a larger capacity swing-yarder will be tried. Wyssen[5] systems, skyline carriage systems, and helicopter logging are also being investigated for use in portions of the Nahmint Valley. The results of current environmental studies and operational trials in Clayoquot Sound and other areas of T.F.L. 44 will also have an important bearing on the future logging methods applied in the Nahmint. Such changes in logging methods and logging systems will have to be phased in gradually in order to introduce the new concepts and new technology efficiently and safely.

4.4.4 Terrain stability analysis

Slope stability is directly related to a combination of soil texture, soil moisture and steepness. The Nahmint Valley is a steep-walled West Coast valley where frequent heavy rainfall could lead to slope failures associated with road building or logging operations. Careful analysis beforehand is needed to provide engineers with the means to avoid unstable areas or to help them take special measures to maintain the stability of slopes during and following harvesting operations.

The least stable slopes in the valley have been identified and mapped by MacMillan Bloedel's specialists. There still remains the need, however, to carefully identify areas at moderate risk of slope failure, because the fact that they, too, can cause serious problems if not dealt with very carefully. To address this need, MacMillan Bloedel plans to complete a thorough terrain analysis, at a scale of 1:20 000, of the entire Nahmint drainage by December 31, 1991. The terrain analysis will be used as a reference in planning and carrying out roadbuilding and logging operations in the valley.

4.4.5 Silviculture

As specified in the Forest Act and the Silviculture Regulation, holders of major harvesting licences (in the case of the Nahmint Valley, MacMillan Bloedel Ltd.) must, before harvesting timber from an area, prepare and submit a Pre-Harvest Silviculture Prescription (P.H.S.P.) to the appropriate Ministry of Forests district manager.

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1. See the Proposed Management and Working Plan No. 2 Tree Farm Licence 44, for detailed calculations by block. The plan may be viewed at MacMillan Bloedel Ltd. Alberni Woodlands or the Port Alberni Forest District Office.
2. Forest Rotation Period. The present rotation period approved for T.F.L. 44 is 80 years.
3. Green-up period: (See glossary) the green-up objective for each block will be identified in the approved Pre-Harvest Silviculture Prescription for the block. The minimum standard will be the current approved *Forest Landscape Guidelines for the Vancouver Forest Region*, but site-specific crop performance will prevail.
4. Interim Forest Landscape Management Guidelines for the Vancouver Forest Region, May, 1990 (Appendix A.3).
5. Wyssen systems: The name given to specialized cable-logging equipment marketed by a Swiss engineering firm.

Before the district manager approves a prescription, he or she must be satisfied that:

- the PHSP has been advertised and made available for public viewing and comment for a period of at least six weeks prior to its submission to the Ministry of Forests;
- a copy of each written comment received that pertains to the PHSP is included, along with a written assessment by the licence holder describing what action will be taken in response to those comments;
- the PHSP document contains all necessary information as detailed in the Silviculture Regulations;
- the prescription is properly signed and sealed by a professional forester; and,
- the actions described in the prescription will ensure that the area proposed for harvest will be successfully reforested with a healthy crop of ecologically suitable trees, free to grow to a commercial size.

Once harvesting is complete, each opening is promptly planted or prepared for natural seed-in as laid down in the approved prescription. The young trees must be carefully tended and monitored to ensure that the stand remains healthy and free from undue competition by other plant species. The licensee is required by law to carry out whatever effort is necessary to bring the stand to a state where it is free to grow to a commercial size as prescribed in the silviculture prescription. The tree farm licensee's responsibility for its protection and care then continues throughout the life of the stand.

4.4.5.1 Silviculture in the Nahmint

Ministry of Forests staff report that MacMillan Bloedel's basic silviculture in the Nahmint has been very successful to date.[1] Recent on-site examinations confirm that:

- the harvesting methods used to date have not resulted in undue loss of future timber growing site;
- harvested openings are being successfully reforested with appropriate tree species within time periods approved by the Ministry of Forests;
- all harvested openings are free from undesirable brush encroachment; and,
- although preparation of formal Pre-Harvest Silviculture Prescriptions has only been legislated since 1988, those PHSPs in effect seem quite adequate to establish healthy crops of ecologically appropriate timber on the harvested land in the valley.

4.4.6 Small Business Forest Enterprise Program (SBFEP)

The Ministry of Forests administers the Small Business Forest Enterprise Program, which applies in part to the public lands within T.F.L. 44. It is likely therefore that from time to time, timber sales will be awarded to SBFEP registrants for timber within the Nahmint Valley. When such awards are made the conditions and standards imposed on the timber sale license will be identical to those in effect for the tree farm license.

4.4.7 Forest protection

Although MacMillan Bloedel's Sproat Lake Woodlands Division has had six to seven forest fires annually over the past 15 years[2], very few of them have occurred in the Nahmint drainage. This is probably because the Nahmint receives about twice the annual precipitation of the drier parts of Sproat Lake Division. Much of the valley's annual precipitation occurs during the fall/winter period, and the steep north-and east-facing slopes retain snow pack and soil moisture well into the spring most year. This reduces the overall fire danger. The portions of the valley that experience the highest levels of fire danger are the south-and-west facing slopes near Nahmint Lake. During dry summers, lengthy periods of extreme fire danger are possible on these slopes. There is a direct relationship between the number of recreationists using an area and the number of wildfires that start.[3] As more and more people visit the Nahmint in future, more forest fires can be expected to occur in the valley.

Sproat Lake is the home base of two Martin Mars aircraft, the world's largest flying tankers, and Nahmint Valley is less than 15 minutes flying time from their base. With the exception of the disastrous Taylor River Fire in 1967, this initial attack capability has been effective in keeping the size of local forest fires to a minimum.

4.4.7.1 Fuel management plan

The Ministry of Forests has approved a fire management strategy proposed by MacMillan Bloedel's Sproat Lake Division that contains the following commitments:

- major development units within mature timber will be selected so that natural topographic features such as lakes and heights of land provide maximum protection;
- portions of the Nahmint Valley particularly vulnerable to forest fire will receive special attention. Additional precautions will include:
    - broadcast burning of the adjacent area prior to expanding the opening;
    - restricting access during periods of high fire danger;
    - curtailment of logging in high-hazard areas;
    - establishment of a fuel break (cat guard);
    - piling and burning of a buffer strip;
    - allowing adjacent immature to green up; and,
    - reducing levels of activity, i.e. firewood cutting;

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[1] *Personal Communication*, R. Sorensen, R.P.F., Resource Officer Silviculture, Port Alberni Forest District

[2] MacMillan Bloedel Limited, Sproat Lake Division *Fuel Management Plan, 1990*

[3] Ministry of Forests Protection Manual, 1988, section 7.1.

- high hazard areas warrant special precautions due to a combination of factors such as timber type, slope, aspect, isolated location, etc., which require that these areas be treated on a site specific basis so as to reduce the risk of fire;
- high-hazard areas will be identified on the cutting permit or five -year-plan maps, or in the fuel management plan;
- curtailment of logging in high hazard openings will occur when:
  - the humidity drops below 30 per cent and
  - high fire danger exceeds five days duration;
- prescribed burning will be site specific and will comply with the burn plan prepared utilizing prescribed fire predictor ranks and the Canadian Fire Weather Index values. All burning plans will be submitted for approval to the Ministry of Forests;
- a minimum of three fire weather stations will be maintained during fire season to provide reliable and representative weather information. During periods of high fire danger, portions of the division may be gated off to restrict access to the public. Allforest use restrictions of the Ministry of Forests will be observed;
- road patrols will be carried out when the Division is shut down due to high or extreme fire danger;
- air patrols will be carried out during periods of high and extreme fire danger;
- a fire watch (either ground, air, or a combination of both) will take place two hours after each shift following the third day of moderate fire danger;
- air patrols after (and often during) lightning storms will be flown in conjunction with the Ministry of Forests' lightning detection system during moderate or higher fire danger;
- all independent fire reporting sources such as boaters along the Alberni Canal, recreationists throughout our operating area, traffic along Highway 4, plus private and commercial aircraft will be used;
- fire fighting equipment will be provided and maintained at each operating site during the fire season. In addition, the division has access to a fire equipment pool located at the Forest Industry Flying Tankers (F.I.F.T.) base;
- Sproat Lake Division has an experienced and well-trained workforce. Training and upgrading will continue, to ensure our people are well prepared for fire season and are in a position to take prompt action in the event of a fire;
- the forestry and engineering crews will receive additional training to be an effective initial response team;
- all prescribed burns will be aggressively mopped-up to minimize the potential for escapes; and,
- Sproat Lake Division will utilize FIFT, can reach any fire within 10 minutes of callout for the helicopter and 25 minutes for the Mars water-bomber.

4.4.7.2 Pest management strategy

Insects and disease

There are no serious forest insect or disease infestations in the Nahmint at present. To ensure that any unusual insect activity is detected promptly, MacMillan Bloedel encourages its employees to report any evidence of unusual defoliation or tree mortality they encounter. In addition, company specialists fly an aerial reconnaissance of the tree farm licence annually, concentrating on remote parts of the T.F.L. area. The tree farm licensee and the Ministry of Forests also consult regularly with Canadian Forestry Service insect and disease specialists in order to stay abreast of problems in the region.

4.4.8 Prescribed fire

The 1975 Nahmint Plan does not discuss slashburning or other uses of prescribed fire in any detail, although there is passing reference to restrictions on slash burning near streambanks and lakeshores. (Appendix 1, Section 6.2.0, iii (h) and (i)).

In British Columbia prior to the 1930s, the disposal of logging slash by burning was rare except during land-clearing operations. Following the disastrous Campbell River fire of 1938, the B.C. Forest Service embarked upon a policy of deliberate slashburning in an effort to reduce forest fire hazard. At its outset, controlled burning was primarily an art practised by a few courageous men with experience at forest fire control. During the 1940s, 50s and 60s, B.C.'s autumn skies were frequently dark with smoke from slashfires.

Increasingly, citizens grew impatient with the inconvenience of the smoke from slashburns . By the 1970s research into the behavior of prescribed fires began to bear results. Foresters and technicians gained access to better training and steadily improving methods for predicting fire behavior. The experience of the old-time fire managers became the foundation for new methods of prescribing fire to achieve predicted results. With improved fire behavior prediction and carefully prepared fire control plans and procedures came a shift toward spring burning as opposed to fall burning of logging slash. Foresters were now able to use fire to meet specific silvicultural objectives, rather than just to clear unwanted logging debris or reduce fire hazard. Through the 1980s, the Ministry of Forests and local and regional governments developed various smoke management policies and practices which have reduced smoke palls near communities. No plans can be perfect, however, and occasionally residents of some localities can still find themselves surrounded by unpleasant smoke; but in many areas, smoke from prescribed fires is much less frequent than in the past.

In recent years the popular media has been filled with information about the environmental effects of slash-and-burn agriculture in the Amazon basin and other parts of the Third World. Some British Columbians equate the harmful use of fire in tropical ecosystems with the use of prescribed fire in our own province. It can be argued that the intense autumn slash-burns of 20 to 30 years ago were harmful to some forest soils, but indiscriminate use of fire is no longer permitted in B.C. If sensitive soils are present, fire is either not prescribed or is scheduled for a period when the soil is saturated and is therefore protected from harm. If foresters plan to use prescribed fire following logging operations, they include a statement of their intentions in the Pre-Harvest Silviculture Prescription. Each prescription must be advertised and made available for public scrutiny well in advance of harvesting operations.

4.4.8.1 Prescribed fire in Nahmint

The Review Team heard opinions on the subject of slash burning in the Nahmint valleys that ranged from "don't slash-burn" to "slash-burn frequently." Those opposed to slash-burning tended to argue that such burning contributes needlessly to greenhouse gases, while those in favor of slash-fires argued that on Vancouver Island such practices tend to stimulate new vegetative growth which in turn benefits game animals and other wildlife. The Review Team agrees to a certain extent with both arguments.

Although there is a place for prescribed fire in the Nahmint Valley, it is not likely to be used there often. The ecosystems in much of the valley do not require burning to prepare the ground for a new forest crop. When resource managers determine that prescribed fire is necessary somewhere, they will bring their proposal to the attention of the follow-up committee discussed in section 4.8, and include it in the appropriate Pre-Harvest Silviculture Prescription. The Review Team proposes that the use of prescribed fire should be confined to those circumstances where the ecological, silvicultural, and wildlife management objectives justify its use.

4.5 Roads, bridges and drainage structures

4.5.1 1975 versus 1990 standards

In 1975 the authors of the Nahmint Watershed Integrated Resource Study recommended that:

"...All logging road construction and road maintenance activities must be of the highest standards..." (Appendix 1 Section 6.2 (A)).

In 1980, the statement quoted above was replaced with the following:

"The Forest Service minimum road specifications shall be adhered to on all main roads. Lower engineering design standards may be accepted on secondary and spur roads, following consultations and approval by Vancouver Forest Region engineering staff" (See Section 6.2 revised).

At first glance it may seem that the 1980 revisions imposed lower standards for road construction in the Nahmint than the authors of the 1975 study intended. Such is not the case. The *British Columbia Forest Service Engineering Specifications for the Planning, Location, Design, Construction, Maintenance and Deactivation of Logging Roads and Drainage Structures in Vancouver Forest Region* lay down very high standards for forest road construction and maintenance (Appendix A.2 - Part B).

The 1980 revisions also allowed the Forest Service to approve certain secondary roads to be narrower or less heavily ballasted than the regional standard. There is no record of MacMillan Bloedel Ltd. having ever requested such consideration.

The environmental protection standards inherent in the present B. C. Forest Service Engineering Specifications substantially exceed those of 1975.[1] The specifications have been reviewed and improved twice since 1975 in light of added experience and the availability of new technology. A third revision is due for publication in 1991.

4.5.2 Construction and maintenance standards

Forest roads must be planned, located, designed, constructed and maintained in a real-world setting where good intentions do not always lead to satisfactory results. The review team scheduled a reconnaissance of the roads and drainage structures in the Nahmint on October 25, 1990 to observe the degree to which the regional standards were being met. Present were:

Chairman of the Nahmint Review Team;
Resource Officer, Engineering, Port Alberni Forest District; and,
Divisional Engineer, Sproat Lake Woods Division MacMillan Bloedel Ltd.

During the night of October 24th and 25th, 1990, a storm system crossed south central Vancouver Island bringing a measured 120 mm of rain in a 15 hour period, with a peak intensity of 14.5 mm in one hour[1]. This storm was typical of those that occur about once or twice per year in the south coast region. It is not to be confused with the exceptional storms that occurred later in the autumn of 1990. The heavy rainfall gave the inspectors the opportunity to directly observe the ability of roads, ditches and culverts to cope with the seasonally heavy waterflows.

The reconnaissance identified that road construction standards had been met or exceeded, with the exception that at certain locations, the ditches and culverts did not fully meet standards. Road surface maintenance was good on active haul roads, but inactive roads showed no sign of recent maintenance. In most areas, because roads had been

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1. Personal Communication, D. Smith, Regional Engineer, Vancouver Forest Region, 1991.

constructed to standard, they were essentially self-maintaining and appeared, with minor exceptions, to be coping adequately with the heavy waterflow. On one cutblock where logging was active, improper drainage control had contributed to unacceptable scouring of ditches and road surface material as well as one slope failure which, although it did not enter a stream, did contribute to increased sediment transport into the watercourse.

4.5.3 Corrective action specified

The reconnaissance also identified that in each instance where unsatisfactory loss or environmental impact occurred, the cause was improper or inadequate drainage control.

The company was instructed to:

- immediately correct the specific drainage problems to eliminate threatened water quality or loss of road improvements;
- evaluate the opening sizes of existing wood culverts on branch and spur roads and increase their size where necessary to meet the Forest Service standard;
- evaluate all roads, both active and inactive, to ensure that cross drains are adequate to minimize ditch erosion and to ensure that the flow from several watercourses is not directed to a single channel; and,
- complete an inventory of all roads, determine the appropriate level of maintenance or de-activation that is required for each road, and submit a plan to complete such required work for approval by the Manager of the Port Alberni Forest District.

MacMillan Bloedel's Sproat Lake Division staff attended promptly to the required work and will submit a detailed road and deactivation maintenance plan to the Forest Service by August 1, 1991.

In section 4.8 the Review Team proposes the formation of a follow-up committee to oversee future activities in the valley. Since both road construction and maintenance have significant potential to cause environmental harm, we have proposed that the Follow up Committee be specifically encouraged to review and comment on these activities.

4.6 Commercial tourism

4.6.1 Angling interest

The very large spring salmon and the summer-run steelhead trout of the Nahmint River system help to make Port Alberni and the Nahmint valley popular destinations for sports fishermen. The majority of anglers arrive in summer and autumn in search of Alberni Inlet's seasonal bounty of salmon. From April to October, the crystal-clear waters of Nahmint River and Lake also draw fishermen from outside the region, in search of the valley's summer run of wild steelhead trout. Although improved road access has brought increased fishing pressure, the steelhead stock remains fragile but viable. (See Section 4.1.2 for a discussion of the Nahmint's annual steelhead run).

4.6.2 Existing enterprises

At present, four freshwater angling guides are licenced to take clients into the Nahmint Valley. The Nahmint also forms part of the territory of a licenced hunting guide based in Port Alberni (Appendix A.6). Currently there are no other enterprises that market services to outdoor recreationists using the Nahmint Valley. Local hotels, motels, marinas, fishing guides and other businesses that offer services to sportsmen and tourists are the principal beneficiaries of the several million dollars spent annually by anglers in the Port Alberni area.

4.6.3 Commercial tourism potential

The Nahmint Valley seems best suited to dispersed, unstructured recreation activities such as angling, hiking, hunting and sightseeing. At present, commercial recreation in the valley is confined to the guiding of steelhead anglers and hunters, activities which are compatible with the recreational activities of the general public who visit the valley (Appendix A-6).

Future commercial recreation enterprises in the Nahmint should be supported, provided that they are compatible with the goal of maintaining quality recreation opportunities for all visitors.

The Review Team identified several activities available in the valley which may contribute to commercial tourism revenues, such as:

- angling for steelhead, resident rainbow trout and Dolly Varden char;
- hunting for deer, bear, cougar, wolf, upland gamebirds and waterfowl;
- wildlife viewing;
- automobile and bicycle touring; and,
- hiking and camping.

The main objective must be to maintain or enhance opportunities for the angling and hunting guides who presently operate in the valley. The fisheries protection and biodiversity corridor systems proposed in this report should assist by maintaining natural streamside features and important wildlife habitat (See Section 6.5).

4.6.3.1 Quality lodge concept

Two suggestions for increasing commercial tourism opportunities in the valley were considered. The first was the concept of a high-quality recreational lodge located on or near the head of Nahmint Lake. Although it is difficult to judge whether such an enterprise could be economically viable in the foreseeable future, there are several factors which would make it unlikely that such an endeavor would be viewed favorably by the Ministries of Environment or Forests:

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1. Records from Ministry of Forest's Cous Creek automated weather station, October 24 - 25, 1990.

- the wild steelhead that reach Nahmint Lake each summer are few in number. The added fishing pressure that would result from a lodge situated adjacent to a fragile fishery would harm the fish stocks and lower the quality of the angling experiences overall;
- as described in section 7.10, the Review Team recommends that the land surrounding the head of Nahmint Lake should be designated as a Forest Service Recreation Site and the Ministry of Parks should be invited to assess the area for inclusion within the provincial parks system. Removing of an important portion of this site to private interests would decrease the public recreation values present there;
- the public recreation facilities in the valley would tend to capture the market that such a commercial lodge might depend upon; and,
- many public respondents told the Review Team, sometimes quite emphatically, that the Nahmint Valley should be maintained in as natural a state as possible, an uninhabited place where visitors can find relative solitude and peaceful surroundings.

For the above reasons, the Review Team recommends that commercial tourism enterprises which use the Nahmint valley should be encouraged to base their operations outside the valley.

4.6.3.2 Circle tour concept

The second concept is related to commercial use of the circle tour discussed in Section 4.3.4.

It is possible that a relatively modest investment in signs and information brochures would encourage visitors to the region to take advantage of the circle tour route discussed in Section 4.3.4, thus extending their stay in the area. There is potential for both operator-guided and self-guided tours. Various brochure packages could be developed in response to the different interests such as natural history or logging and forestry, among people travelling the tour route.

The Ministry of Forests, MacMillan Bloedel Ltd. and the Alberni Clayoquot Regional District should cooperate to develop the commercial potential of the circle tour, with the advice and assistance of the Ministry of Tourism.

4.6.4 Gibson-Klitsa wilderness study area

As discussed in section 4.3.5 of this report, the Gibson-Klitsa plateau has been recommended by both MacMillan Bloedel Ltd. and the Ministry of Forests as a potential wilderness area worthy of study. There is much work to be done before a trail system links the Pacific Rim Highway through the Taylor River Valley with the roads in the Nahmint Valley, but once completed, such a feature would add real value to wilderness recreation enterprises in the Port Alberni area.

4.6.5 Wildlife viewing

Viewing of the Nahmint's game species and its many other forms of wildlife, would also add to the overall satisfaction of clients and tourists who visit the valley and has commercial potential in the future.

4.7 Old-Growth

In recent years many British Columbians have voiced concern that important segments of our old-growth forests are in danger of being lost forever due to the rate of harvesting in several regions of the province. In 1989, the Minister of Forests responded to these concerns by initiating the development of a province-wide strategy to identify, conserve and manage critical examples of old-growth forest.

In early November 1989, the Ministry of Forests sponsored a workshop attended by approximately 80 invited delegates, who worked toward consensus on identifying:

- old growth issues;
- definitions of old-growth;
- social, economic and scientific objectives for old-growth;
- research and inventory requirements;
- criteria for selection of old-growth reserves; and,
- a blueprint for an old growth strategy.

At a subsequent workshop in April 1990, project objectives were formalized and five sector-specific working teams were assembled to focus on the following interrelated topics:

- ecological research and inventory;
- old-growth values;
- policy development;
- management practices; and,
- conservation of areas.

4.7.1 Nahmint old-growth deferral

During the summer of 1990, the public was invited to submit proposals for areas in need of immediate deferral from harvesting, to allow their value as critical old-growth to be assessed. Among the areas proposed was a stand of timber in the upper Nahmint in which Douglas-fir is the predominant species. First the area was erroneously identified as Block 517 and later as Block 518. In fact the area of interest is found between Block 516 and 518 (Figure 9).

In November 1990, the Old-Growth Working Group's Conservation-of-Areas Team recommended that since no plans have been approved to permit the area to be harvested, a Ministry of Forests map notation identifying the area as a candidate for review as a possible old-growth reserve would be sufficient to ensure that no harvesting takes place before a thorough assessment of its value as an example of representative old-growth is complete.

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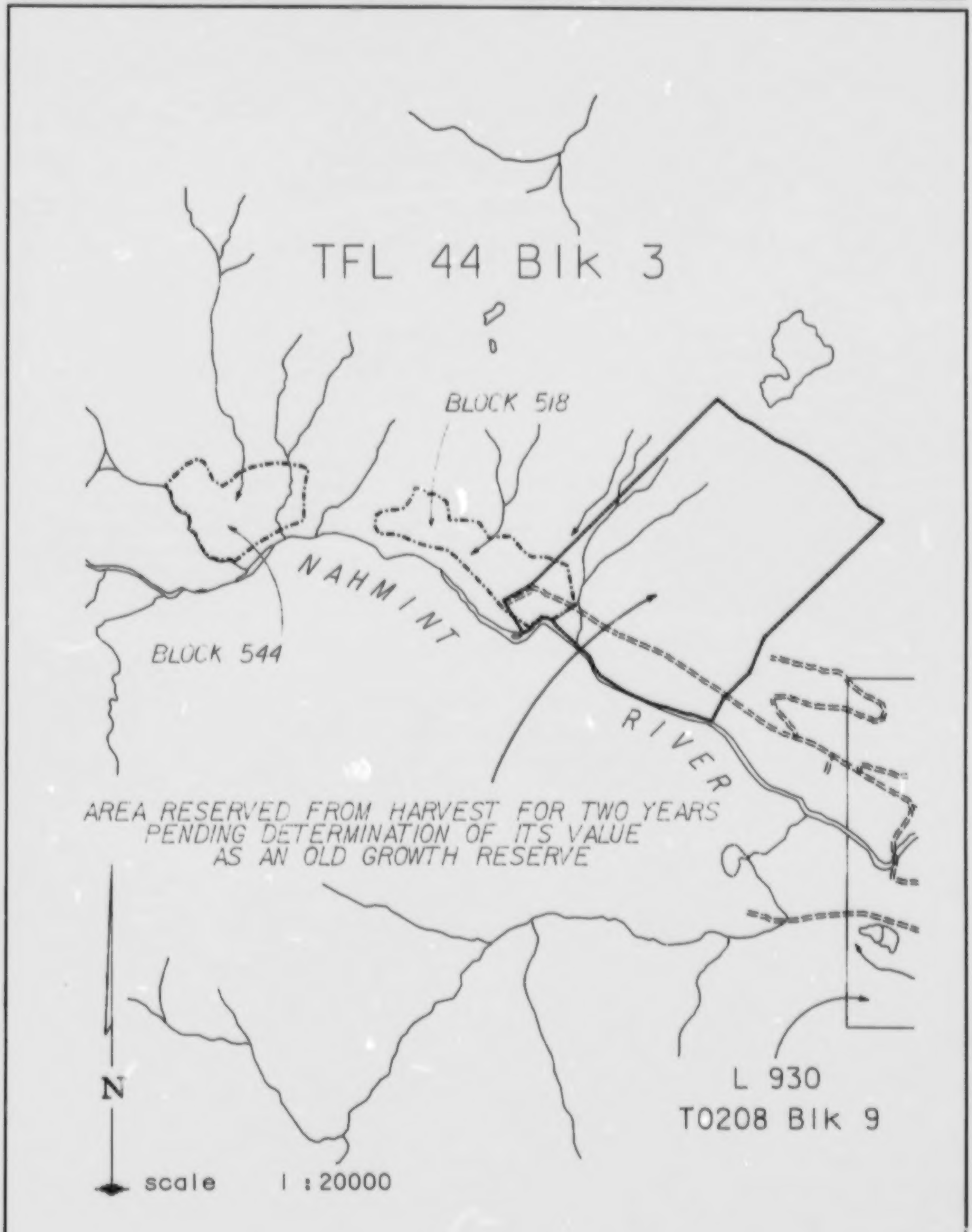
1. Towards An Old Growth Strategy, First Draft Summary of The Old Growth Workshop, Ministry of Forests November 21, 1990. Appendix A.5

Figure 9 Area reserved from harvest pending determination of its value as an old-growth reserve


TFL 44 Blk 3
BLOCK 518
BLOCK 544
NAHMINT
RIVER
AREA RESERVED FROM HARVEST FOR TWO YEARS
PENDING DETERMINATION OF ITS VALUE
AS AN OLD GROWTH RESERVE
L 930
T0208 Blk 9
N
scale 1 : 20000

That map notation has now been duly registered in accordance with the Old Growth Working Group's recommendation. Assessment of the area's old-growth values will take place in the spring or early summer of 1991.

The Conservation-of-Areas Team further recommended that the Nahmint Review Team should be directed to consider old-growth in our recommendations and they also encouraged the Ministry of Forests to proceed with MacMillan Bloedel's proposal for a recreation area and old-growth reserve at the northwest end of Nahmint Lake. The Nahmint Review Team concurs with the Old Growth Deferral Team's advice. Other areas of old-growth forest the Team recommends for either long-term (100 years +) or permanent deferral, are discussed in Sections 6.2, 6.3, and 7.9 of this report.

4.8 Nahmint Follow-up Committee

A resource management plan is usually put into action over the course of several years, in the midst of ever-changing environmental, economic and political circumstances. In spite of this, citizens have the right to expect that the decisions taken as the plan is being implemented are in the public interest and in keeping with the intent of the approved plan. It is the responsibility of government agencies such as the Ministry of Forests to exert the public interest in these processes.

The problem is that there is no single public interest. There are instead a whole range of needs and demands, which sometimes conflict with one another. If a particular plan is to be successfully followed under such circumstances, there must be a mechanism for frequent communication between representatives of key public interests and the persons accountable for putting the plan into action. For this reason, at the outset of this review the Ministry of Forests executive instructed the Review Team to prepare recommendations regarding the nature and mandate of an ongoing follow-up committee to act as a watch-dog group that will monitor forest management activities in the Nahmint Valley.

The Review Team proposes a Follow-up Committee for the Nahmint comprising those representatives of government agencies and the tree farm licensee who are responsible for making the day-to-day decisions under the plan, as well as representatives from a range of public and special interests.

4.8.1 Proposed Follow-up Committee structure

The Review Team proposes that the Nahmint Follow-up Committee comprise the following representatives:

- Federal Department of Fisheries and Oceans, District Fisheries Officer;
- Provincial Ministry of Environment, District Habitat Technician;
- Provincial Ministry of Forests, Resource Officer, Planning (chairman);
- Alberni-Clayoquot Regional District Board, appointee;
- Alberni Environment Coalition, appointee;
- B.C. Wildlife Federation, appointee;
- IWA/Sproat Lake Division Woodworkers, appointee;
- Nuu-cha-nulth Tribal Council, appointee;
- Ucluelet Band Council, appointee;
- Outdoor Recreation Council of B.C., appointee;
- Share Our Resources, Port Alberni appointee;
- Trapline Holder, Registered Trapline TR01077401 (Nahmint); and,
- Tree Farm Licensee (MacMillan Bloedel Ltd.) Sproat Lake Woodlands appointee.

4.8.2 Proposed terms of reference for the Follow-up Committee

- The Ministry of Forests representative will chair the committee because the valley lies within a tenure administered under the *Forest Act*;
- the Follow-up Committee will be advisory only. Decision-making authority will remain with the accountable government agencies;
- the committee will review and evaluate all resource management plans and activities that are related to the Nahmint Valley. Special emphasis will be placed on road and bridge construction and maintenance, drainage control practices and plans, and practices related to timber harvesting and silviculture;
- the committee will confine its investigations and evaluations to the Nahmint watershed.
- the committee will report its findings in the form of recommendations directed to the appropriate resource managers (i.e. Manager, Port Alberni Forest District and the Manager of Fish and Wildlife, Ministry of Environment, Nanaimo Region);
- to keep travel costs within reason, and ease the scheduling of meetings, the organizations represented on the committee will be encouraged to appoint their representative from among residents of the Alberni-Clayoquot Regional District wherever possible;
- each member's term of appointment to the committee will be at the pleasure of their appointing agency or organization, but a minimum term of three years will be encouraged in order to provide the committee with a degree of continuity;
- the committee will be expected to arrive at its findings by consensus, but dissenting viewpoints will be recorded and communicated in conjunction with the committee's recommendations.;

- committee members will be governed by the "no dissent is assent rule", in which the absence of stated disagreement from a member within a time frame specified by the chairman will be taken as agreement on the matter in question;
- each member of the committee will be free to publicly voice their personal opinion about any matter before the committee;
- only the chairperson or a person delegated by them in writing will be authorized to speak publicly on behalf of the committee as a whole;
- the committee will be free to recommend scientific studies but will not control or lead them. Control and leadership of such studies in the Nahmint will remain the responsibility of the funding agencies in each case. The committee will be encouraged to observe and comment upon any facet of such studies that they choose;
- the frequency, purpose and timing of committee meetings will be determined by consensus within the group, but the group must meet at least once a year, preferably in conjunction with the annual update of the T.F.L. 44 Five Year Development Plan concerning the Nahmint valley;
- at least once a year the committee must carry out a field inspection of developments and operations in the Nahmint Valley. The general public should also be invited to attend;
- member's out-of-pocket expenses for travel, meals and lodging will be borne by the employer in the case of government or forest industry representatives, and by the Ministry of Forests in the case of all other committee members;
- all clerical and support services required by the committee will be provided by the Port Alberni Forest District; and,
- if and when natural catastrophes or other events result in the need to take measures which impinge upon the intent of the approved Nahmint plan, the chairman of the Follow-up Committee will promptly inform all members of the circumstances and the actions taken. The committee will then decide by consensus whether they must visit the Nahmint Valley to examine the circumstances directly.

4.9 Public Involvement

Section 5.24 of the 1975 Nahmint Study describes the steps taken by the original project's leaders to gather public opinion on integrated use of the valley's forest resources (Appendix A.1). They invited interested parties to submit written comments.

The 1990 Review Team sought public opinion before preparing updated recommendations. The team decided that a series of open house information sessions would give the public the best overall chance to review the available material and discuss their concerns with team members. News releases and advertisements were placed in 16 south-island newspapers, and open-house information sessions took place as scheduled: August 18th at Nanaimo, August 25th at Victoria and September 9th at Port Alberni.

Those who chose to make formal presentations were encouraged to do so at the open-house sessions. These presentations were recorded and transcribed. Comments drawn from the transcripts are presented in Appendix A.8. The entire text of the transcripts, as well as all written submissions received by the Review Team, are included in Volume II of this report.

To provide further opportunity for dialogue, the Review Team invited the public to meet with team members on site in the Nahmint Valley on Saturday, September 8th. Team members believe that such meetings in the field gave all parties the best opportunity for reasoned discussion and mutual learning. About two dozen persons responded to the invitation.

4.9.1 Future public involvement in the Nahmint: consultation versus participation

As discussed in section 4.8, the Review Team proposes to invite members of the public to participate in a follow-up committee which will be asked to monitor resource management in the valley on behalf of the general public. Although the resource ministries are accountable to the legislature for making resource management decisions, some people advocated that the logical next step for the Ministry of Forests is to invite members of the public to participate directly in preparation of future integrated resource use plans for the Nahmint Valley. In practice, such direct participation can be very problematic, consuming large amounts of time and resources among the participants, with little resulting consensus. The prospect is not hopeless, however. Integrated resource use plans for the Tsitika watershed on Vancouver Island and the Clinton Creek watershed in the southern B.C. Interior were successfully prepared with direct participation by representatives of special interest groups and the general public.

At the moment, two valleys within T.F.L. 44, — the upper Carmanah Creek and Tofino Creek, — are the subjects of planning efforts in which members of the public are directly involved. It is too early in both those processes to draw conclusions about their success, however.

The Review Team agrees in principle with the view that representatives of the public, special interest groups and local native people should be invited to participate directly in preparing future Local Resource Use Plans for the Nahmint Valley. The precise nature and extent of such participation should then be determined, by the accountable government ministries.

4.10 Future local resource use planning for the Nahmint Valley

As stated in the introduction, the purpose of the 1990 process was to review and update the 1975 Nahmint Watershed Integrated Resource Study, not create a new plan. The recommendations in this report should, if adopted, provide more protection to all the natural resources in the valley than the original plan as it was amended in 1980. The recommendations should also be sufficient to guide and direct resource management and maintain resource conservation and preservation options in the valley over the next three to five years. Beyond the mid-1990s, however, resource management decisions in the Nahmint should be guided by an entirely new integrated resource management plan. The studies which supported the 1975 plan have become outdated and are in need of review and re-evaluation. A new plan is also required to properly relate the results of detailed slope stability assessments and the operable timber inventory and depict them in total-chance harvesting plans for the valley, which identify the full range of harvesting practices planned for use in the drainage. By the mid 1990s resource management decisions in the valley should also be based upon additional biophysical inventories such as :

- inventory and mapping of the biogeoclimatic subzones, variants and site associations throughout the valley;
- a detailed ecological inventory and biodiversity analysis;
- an operable timber inventory tied to a range of market values ;
- an inventory of the critical fish habitat in the Nahmint watershed, particularly in the Nahmint Lake vicinity and the upper valley;
- a heritage-values inventory prepared with the direct involvement of local native people;
- hydrological assessments:
  - application of the Watershed Workbook[1];
  - stream channel conditions;
- a terrain stability inventory; and,
- an assessment of both the environmental and social impacts of a range of resource development options for the valley.

The next few years promise important change in how land use and natural resource use, and how these concerns are dealt with in our province, as the recommendations of the B.C. Forest Resources Commission and similar forums are translated into public policy.

It is logical to rely on the results of the present review to guide harvest planning over the next two or three years, while efforts at integrated resource planning in the Carmanah Valley and Tofino Creek proceed. It is likely that both the lessons and successes of those efforts can contribute toward a process for developing a new integrated resource management plan for the Nahmint. The Review Team recommends that a Local Resource Use Plan be prepared for the Nahmint valley in time for its recommendations to be incorporated into Management and Working Plan Number 3 for Tree Farm Licence 44, due in 1996.

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1. Watershed Workbook, Forest Hydrology Sensitivity Analysis for Coastal British Columbia Watersheds, Ministry of Forests, 1987.

5.0 Management goals

5.1 Forest management goals

5.1.1 Harvesting

The harvesting goal is to plan and direct an acceptable pattern and level of logging on a composite base of all other natural resources in the Nahmint Valley.

5.1.2 Forest protection

The forest protection goal is to protect the forest environment from loss and damage resulting from uncontrolled fire, insect or disease attack by :

- carefully regulating industrial activities and taking the preventative measures outlined in the MacMillan Bloedel Ltd., Sproat Lake Division Fuel Management Plan approved by the Forest Service July 24, 1990;
- maintaining road access, a rapid detection and suppression capability and an awareness among watershed users of their responsibilities toward fire and environmental protection; and,
- ensuring early detection of abnormal insect and disease activity and taking effective action, giving priority to the harvesting of damaged stands.

5.1.3 Silviculture

The silviculture goals are to maintain and, where possible, enhance the silvicultural productivity and economic value of the valley's harvested lands by ensuring the timely establishment of a healthy crop of ecologically suitable trees free to grow to commercial size.

To carry out incremental silviculture and stand-tending operations as laid down in the approved Management and Working Plan for T.F.L. 44, such as:

- fertilization;
- juvenile spacing;
- pruning; and,
- commercial thinning.

5.1.4 Recreation

The recreation goals are:

- to manage the recreation values in the Nahmint drainage to provide a wide range of opportunities and experiences;
- To preserve the recreational experiences and opportunities that presently exist in the vicinity of Nahmint Lake.
- To enhance public use and enjoyment of the valley through the development and maintenance of campsites and trails constructed to Ministry of Forests standards; and,
- To identify and protect recreation resource values.

5.1.5 Forest landscapes

The forest landscape goals are:

- to classify the Nahmint Valley into landscape-sensitivity categories;
- to manage the forest landscapes within the Nahmint drainage, according to the principles in the *Ministry of Forests Landscape Handbook*, the *Landscape Management Guidelines for the Vancouver Forest Region*, and the *Ministry of Forests Recreation Manual;*
- to ensure that the appearance of all cutblocks located within areas identified in the Nahmint Landscape Inventory as having high visual sensitivity meets a partial retention visual quality objective[1];
- to preserve the natural visual experience associated with the lakeshores and riverbanks in the valley; and,
- to minimize the visual impact of roads in the valley.

5.2 Fisheries management goals

The fisheries goals are:

- to plan and implement natural resource development to ensure no loss of the system's fish production capability;
- to enhance the capacity of the Nahmint watershed to produce wild fish stocks by the application of natural enhancement techniques;
- to provide high-quality angling experiences in natural settings throughout the valley;
- to include user-groups and the interested public in planning and implementing fisheries management in the valley, by ongoing consultation;
- to protect the environment from damage associated with recreational use of the valley by:
  - installing educational and informational signs;
  - installing recreation facilities at key locations;
  - constructing trails and other improvements according to Ministry of Forests standards; and,
  - enforcing the Forest Act, the Litter Act and other pertinent legislation;
- to provide members of the public with the opportunity to advise and comment on the planning and implementation of recreational development by inviting public participation in annual reviews of the management of the Nahmint Valley.

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1. A partial retention visual quality objective requires that alterations remain visually subordinate to the character of the landscape. A more detailed explanation can be found in Appendix II of the Forest Landscape Handbook published by the Ministry of Forests.

5.3 Wildlife management goals

The wildlife management goals are:

- to maintain, enhance and promote sound wildlife habitat management strategies which will ensure self-sustaining wildlife populations; and,
- to provide the public with opportunities to appreciate, study, view, hunt, or commercially use wildlife in their natural habitats.

5.4 Old-growth retention goals

The old-growth retention goals are:

- to ensure that old-growth natural forest is retained in riparian corridors, recreational reserves and biodiversity corridors sufficient to meet the essential requirements of wildlife, and to maintain the natural character of those areas in the valley of greatest recreational value;
- to examine and compare the natural forest of the Nahmint with comparable stands elsewhere;
- to determine if there are stands in the valley that are of regional or greater significance as representative of old-growth forest; and,
- to reserve from harvest and protect any such representative old-growth stands that are identified.

5.5 Commercial tourism goals

The goal in the Nahmint Valley will be to facilitate those commercial tourism activities which are compatible with quality outdoor experiences for all recreational users.

6.0 General recommendations

6.1 Forest management

These recommendations apply to the entire Nahmint Valley as distinct from the area-specific recommendations that follow in Section 6.3.

6.1.1 Forest harvesting, road construction and maintenance

- All road construction, road maintenance and harvesting related activities will be carried out in accordance with the British Columbia Coastal Fisheries - Forestry Guidelines and the British Columbia Forest Service Engineering Specifications for the Planning, Location, Design, Construction Maintenance and Deactivation of Logging Roads and Drainage Structure in the Vancouver Forest Region.

  In addition:
- Road location will be avoided on fluvial escarpments or adjacent to those slopes where sidecast material will be added to the escarpment.
- All road development in the vicinity of streams where either rock work or unstable material may potentially enter the stream bed will be subject to multi-disciplinary on-site inspection.
- Efforts will be made to use long-reach or other alternative harvesting systems in those locations where soil instability or visual sensitivity precludes conventional yarding methods.
- When a road must be built on middle or upper landscape positions with slope greater than 60 per cent, the following steps will be taken:
  - Avoid locating roads through areas of significant soil-creep and where volumes of unconsolidated material must be excavated. Where essential, endhauling will be performed if included instability is expected through side casting. All endhaul dumping sites require prior evaluation.
  - Where prescribed, full-bench road construction techniques and endhauling of surplus material will be undertaken where instability is expected by sidecasting.
  - Road locations will be avoided through or immediately adjacent to unstable soil or active slide areas. If these locations are essential or the above steps are impractical, or if induced failures are expected to be significant, site-specific investigations will be performed by MacMillan Bloedel's Land Use Planning Advisory Team. They will evaluate the construction techniques proposed and the estimated damage and set any site-specific constraints.
- Finally, if through the above practices, fisheries values could be affected as a result of erosion of sidecast or endhauled material, a joint inspection with fisheries agencies through the Forest Officer will be called.

6.1.2 Forest protection

- MacMillan Bloedel Ltd. will maintain road access to the head of Nahmint Lake during summer periods, unless instructed by the Ministry of Forests to close the road to the public.
- Lightning location monitoring and air and ground patrols will be maintained by MacMillan Bloedel Ltd. and the Ministry of Forests in accordance with forest fire danger assessments. Aggressive initial attack and mop up will occur on any wildfires encountered in the valley.
- Fuel Management plans will be followed to minimize hazardous fuel accumulations and reduce fire risk.
- The Nahmint Valley will be regularly assessed for the presence of forest pests and diseases. Any unusual occurrences will be brought to the attention of the proposed Nahmint Follow-up Committee, along with a plan of action to deal with the occurrence.

6.1.2.1 Prescribed fire

Broadcast burning will only be undertaken to meet specific ecological, silvicultural or wildlife management objectives.

6.1.3 Silviculture

- MacMillan Bloedel Ltd. will continue to aggressively pursue basic silviculture activities to ensure harvested areas are reforested in a timely fashion, with healthy, ecologically suitable trees free to grow to a commercial size.
- MacMillan Bloedel Ltd. and the Ministry of Forests will continue to implement intensive forestry activities aimed at improving the volume and value of future forest crops in the valley.

6.1.4 Forest recreation

- The Nahmint Valley Recreation Inventory and Landscape Assessment prepared for MacMillan Bloedel Ltd. by Juan de Fuca Environment Consultants in October, 1990 will be used as the principal guide for management of the natural recreation resources of the Nahmint Valley. MacMillan Bloedel Ltd. and the Ministry of Forests will jointly prepare a recreation management plan for the Nahmint Valley and submit the plan for Forest Service approval by December 31, 1991.

  The recreation management plan will include:
  - discussion of public recreational use in the Valley and the preferred activities;
  - a scheduled of planned recreation projects and improvements;
  - a description of facility standards;
  - a design for the boat launch facility at the head of Nahmint Lake;

  - a schedule for development of recreational sites and trails, and sign programs; and,
  - a description of management responsibilities and funding sources.
- All areas identified by the recreation inventory as having high recreation potential will be reserved from harvesting until the above recreation plan is approved.
- Future recreation developments carried out in the Nahmint by either the tree farm licensee or the B.C. Forest Service must be conducted in accordance with the recreation management plan.
- The lands surrounding the northern end of Nahmint Lake (see Map 3) have been identified as having particularly high recreation value, in the valley. The Ministry of Forests will promptly establish a formal recreation map notation over the area, once negotiations between MacMillan Bloedel Ltd. and the Ministry of Forests concerning the standing timber on Old Temporary Tenures in the area are concluded.
- The Gibson-Klitsa plateau has been identified by MacMillan Bloedel Ltd., the Ministry of Forests, and the public as having high wilderness recreation value. The Ministry of Forests will promptly initiate the process of studying the plateau (Map 3) as a potential wilderness area within Tree Farm Licence 44.
- MacMillan Bloedel Ltd. and the Ministry of Forests will jointly investigate the feasibility of developing access trails into the Gibson-Klitsa plateau.
- The Ministry of Forests will ensure that all user groups and interested members of the public are actively involved in planning recreational trails, sites and other developments in the Nahmint Valley. The recreation management plan will be available for public review and comment in conjunction with the annual update of the Sproat Lake Division's Five-Year-Development-Plan.
- The Ministry of Forests will involve user groups in the development and maintenance of recreational trails in the valley by encouraging and facilitating volunteer efforts to improve angler and hiker access in following the approved recreation management plan.
- The Ministry of Environment will initiate restrictions that limits the boat-motors on Nahmint Lake to a maximum of 15 horsepower and limit boats using Gracie Lake to use of electric motors only.

6.1.5 Landscape management

- All cutblocks proposed in those high-sensitivity areas surrounding Nahmint Lake will be designed to meet a partial retention Visual Quality Objective (Figure 6).
- Landscape analysis reports will be required for harvesting blocks proposed in all moderate and high-sensitivity zones identified in the Nahmint Landscape Inventory prepared by Juan de Fuca Environmental Consultants - November, 1990.
- All cutblocks proposed in low and moderate sensitivity zones and not viewed from the lake or main travel corridor are to be managed for a modification Visual Quality Objective.[2]
- In general, logged openings will be smaller and more widely distributed than in the past. Throughout most of the valley, clearcut openings will range widely in size, but typically will be in the 30-hectare range. Openings in excess of 40 hectares will be the exception.
- Selection logging or patch cuts up to one-hectare may occur below the Nahmint mainline logging road on the east side of the lake or below the natural break on the west side of the lake, provided they meet a retention Visual Quality Objective.[3] Aesthetic buffers in which no logging will take place are to be retained along both sides of the upper and lower river and surrounding Nahmint Lake. These areas will be managed for a retention Visual Quality Objective to preserve the natural experience of the forested shoreline. (See Section 6.2.)
- Road development must be minimized on slopes with a high landscape-sensitivity rating. Wherever feasible, midslope roads will be avoided.
- Where roads must cross visually-sensitive landscapes, cuts, fills and avoidable sidecasting will be minimized.
- In instances where the visual impact of new road construction dominates sensitive landscapes, rehabilitation measures must be implemented (i.e., road reclamation upon completion of harvesting, the spreading of overburden and hydro seeding).
- Long-term harvesting plans in the valley, will ensure that the visual impact of any one pass does not compromise the opportunity to manage the visual impact of future passes.
- Visually Effective Greenup (VEG) will be evident on previously logged blocks prior to new logging being proposed adjacent to them.[4]

1. Forest Service Recreation map notations are used to indicate Ministry of Forests interest in managing an area primarily for its recreation values. Recreation map notations are further described in Appendix 5 of the Forest Service Recreation Manual.
2. A modification Visual Quality Objective allows alterations to dominate the original characteristic landscape. However, alterations must borrow from natural line and form to such an extent and on such a scale that they are comparable to natural occurrences.
3. A retention Visual Quality Objective means that man's activities are not evident to the casual visitor.
4. Visually Effective Green-up is the stage of reforestation in which the renewed forest cover is clearly perceivable to the average forest visitor. Areas are generally considered to have achieved V.E.G. when, viewed year-round from the typical land-or water-based locations, stumps, slash, and open ground are no longer clearly visible. V.E.G. implies that regeneration heights, crown closure, and stocking are sufficient to provide an appropriate degree of visual cover, color, and texture. In low public use areas, or in areas of high snow levels in which winter use is minor, seasonal variation in V.E.G. may be accepted.

6.1.6 Terrain stability analysis

- MacMillan Bloedel Ltd. will complete a thorough terrain analysis of the Nahmint Valley at a map scale of 1:20 000, by December 31, 1991.

6.2 Fisheries management

The following prescriptions will apply throughout the Nahmint Valley and will only be superseded by area-specific prescriptions described in Section 7.0.

- **The British Columbia Coastal Fisheries/Forestry Guidelines will apply as the minimum standard on all areas in the Nahmint Valley not covered by area specific prescriptions.**
- **Resource managers will plan, where possible, to maintain fisheries protection Corridors on both sides of all those lakeshore and stream reaches in the Nahmint drainage that are classified as "Class One Waters" according to the Fish/Forest Guidelines (Figure 2).**
- **The width of the fisheries protection corridors will be determined on-site in the field, but resource managers should plan for the streamside preservation zone to be typically 60 metres more or less, and the buffer zone to be 30 metres.**
- **The boundaries of the Fisheries Protection Zones will vary to conform to local terrain and minimize blowdown potential. The boundaries will always be placed in the most environmentally sound location, as determined on-site through joint assessments by representatives of the managing agencies.**
- **Fisheries Protection Corridor boundaries will be reviewed in the field on an annual basis by the proposed Nahmint Follow-up Committee.**
- **At locations where watercourses meander, additional width be given to the Fisheries Protection Corridors to minimize potential windthrow.**
- **Management of the buffer zone will be aimed at feathering the edge of the Fisheries Protection Zones to meet the dual objectives of reducing the risk of undesirable windthrow and enhancing the biodiversity of the corridor area.**
- **Harvesting within the buffer zone portion of the streamside corridors will concentrate on the taller trees in the stand and be limited to removal of five to 10 per cent of the number of trees in the stand.**

6.3 Wildlife management

In view of the importance of wildlife and the prominence of wildlife's needs in integrated resource management, the review team recommends that plans for developing the forests of the Nahmint Valley incorporate:

- assessment by Ministry of Environment managers of the impact of 20 year harvesting plans upon fragmentation of important wildlife habitat;
- modification of cut/leave patterns to maintain continuity of plant and animal communities;
- application of silvicultural treatments which will maintain or enhance wildlife habitat values in high-capability areas as well as adjacent to areas of critical habitat;
- provisions for deferring timber harvesting in areas identified as critical wildlife habitat;
- provisions for making diverse habitat for forage production, visual cover and escape cover available in areas adjacent to critical habitat areas;
- replacement of the present network of permanent firebreaks with an extensive system of biodiversity corridors which embrace both old-growth and advanced second-growth timber and which consist of a variety of forest types, ecosystem associations and representative wildlife habitats;
- identification of wildlife viewing locations and integrate their presence with other resource uses;
- maintenance of the full range of forest age classes from new forests to old-growth; and,
- regulation of forest harvesting, hunting, guide-outfitting and commercial trapping in order to maintain viable, healthy populations of game animals and furbearers.

6.4 Old-growth

- **The area recommended for assessment as a potential old-growth reserve (Figure 9) will be deferred from harvesting pending the outcome of the assessment. The timber stands surrounding the head of Nahmint Lake (Figure 8) will also be assessed for their value as old-growth.**

6.5 Commercial tourism management

- Commercial tourism opportunities in the Nahmint Valley will be integrated and made compatible with local recreation use.
- Commercial tourism enterprises should be encouraged to include the Nahmint Valley as one of several readily accessible activity areas for their clients.
- To facilitate dependable access for visitors and tourists, road access to the Nahmint Valley will be kept open to the public year-round on a seven-day-per-week basis as much as possible, except for periods of heavy snowfall and extreme fire hazard as determined by the B.C. Forest Service.
- The Forest Service, the Tree Farm Licensee, and the Board of the Alberni Clayoquot Regional District will cooperate with the advice and the assistance of the Ministry of Tourism, to develop the Nahmint Valley circle tour and facilitate use of the tour route by commercial operators, local residents and visitors to the Port Alberni area.

6.6 Private improvements

- No private buildings, or similar improvements will be encouraged within the vicinity of Nahmint Lake. (See Section 7.1 for recommendations specific to development in and around Nahmint Bay on Alberni Inlet).

6.7 Windthrow management

Wherever leave-strips or timbered corridors are prescribed in the Nahmint Valley, their exact boundaries must be determined by an on-site inspection by knowledgeable representatives of the T.F.L. Licensee, Forest Service, Ministry of Environment and Fisheries and Oceans Canada, with the support of pedologists, hydrologists, limnologists and other specialists where required.

If significant blowdown problems are encountered, the leave strip boundaries must be revised on a site-specific basis to improve their windfirmness and better meet their environmental protection objectives. (See Appendix A.7 for guidelines aimed at managing the risk of excessive blowdown.)

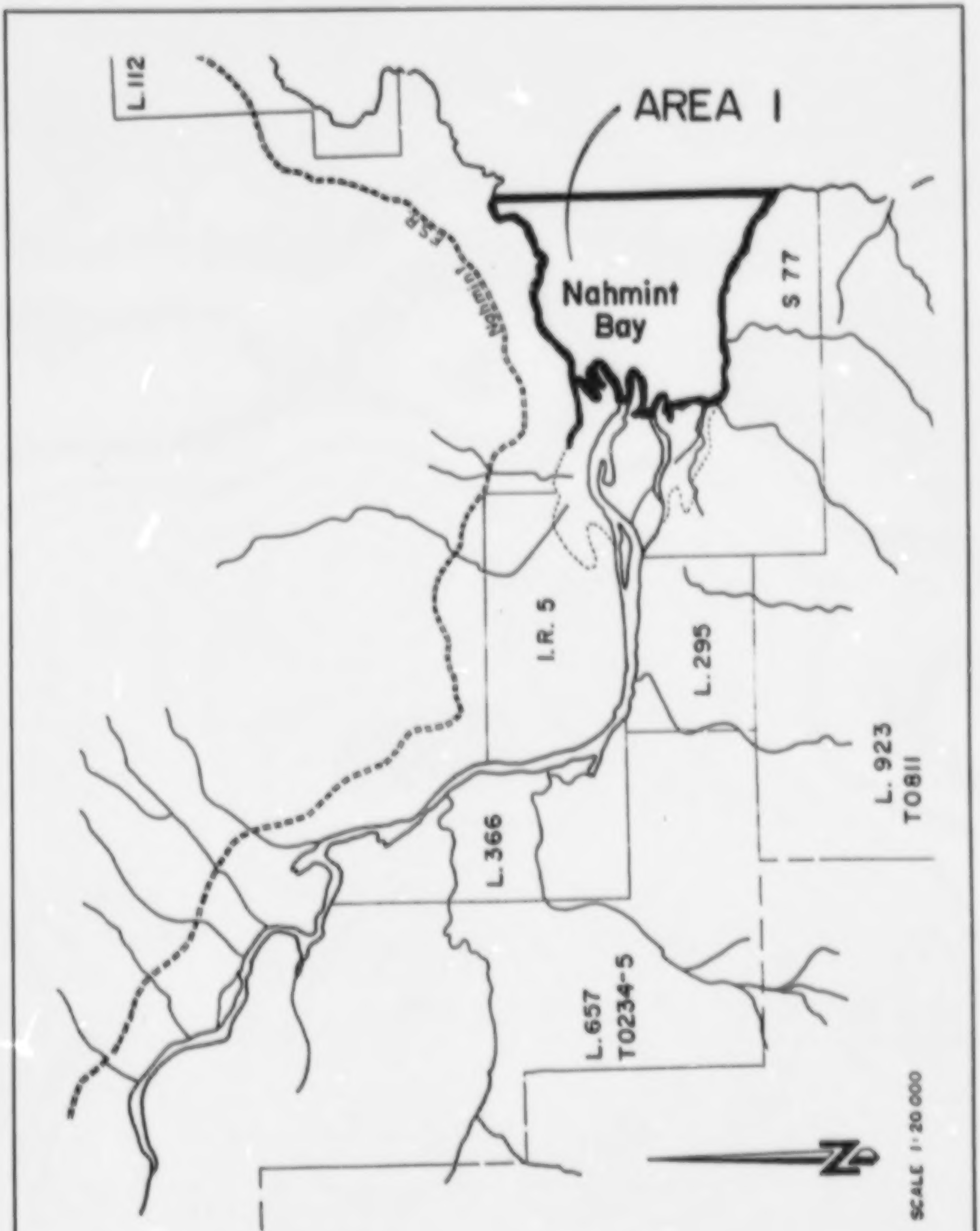
6.8 Nahmint Follow-Up Committee

The Review Team proposes that the Ministry of Forests create a follow-up committee to advise the ministry regarding future integrated resource management in the Nahmint Valley. (See Sections 4.81 and 4.8.2.)

6.9 Future resource use plans in Nahmint

A Local Resource Use Plan will be prepared for the Nahmint Valley in time for its recommendations to be incorporated in Management and Working Plan Number 3 for Tree Farm Licence 44, due in 1996.

Figure 10 Area 1: Nahmint Bay


AREA 1
Nahmint Bay
L.112
Nahmint F.S.R.
S 77
I.R. 5
L.295
L.923
T0811
L.366
L.657
T0234-5
N
SCALE 1:20 000

7.0 Area-specific prescriptions

The following prescriptions apply to the areas designated on Map 1 and Map 2. In most cases the numbered units are derived from landform units or portions thereof. The landform map should be referred to for exact boundaries of the larger units.

7.1 Area 1: Nahmint Bay (Figure 10)

Resource values

- Fisheries values are very high.
- Wildlife capability is high in terms of spring forage for blacktail deer and habitat for other wildlife. The estuarine environment provides overwintering, feeding and/or breeding wildfowl habitat and seasonal cougar and blackbear habitat.
- Recreation values are high as a result of existing and potential fishing, boating and wildlife viewing activities associated with the estuary.
- Estuary landscape sensitivity is high as viewed from the waters of Alberni Inlet.
- Timber values are low at present, but the potential values are high in the immature stands growing on good forest-growing sites in the vicinity.

Recommended management prescriptions

- Plan to retain a minimum of 60 metres of timbered shoreline around both Nahmint estuary and Nahmint Bay, in the form of a fisheries protection corridor.
- Exclude further intensive commercial development for log storage, marinas, logging camps or similar enterprises within the Nahmint Bay areas, as defined by the Fisheries and Oceans Canada sport fishing boundaries.
- Pay special attention to the landscape during future logging development, as there is considerable viewing time for boaters passing through Alberni Inlet. Manage shoreline to a 'retention' Visual Quality Objective.

7.2 Area 2: Nahmint Estuary(Figure 11)

Resource values

- Fisheries values are extremely high; this is the most important salmon producing section of the Nahmint River.
- Recreation values are high, related to fishing.
- Timber values are low.

Recommended management prescriptions

- The Recreation Management Plan, due for completion late in 1991, will address the need to respond to increased recreational use of the lower Nahmint River by scheduling the construction of a parking area, access trail and campsites at the location shown in Figure 8.
- In conjunction with the completion of the campsite, an access trail should be constructed upstream along the river, to improve access to the fishing pools in this vicinity.
- Plan to maintain an undisturbed 60-metre-wide corridor on both sides of all class one waters in this area as a fisheries protection corridor. (Section 4.1.6);
- This area will be managed for a "Retention" Visual Quality Objective as viewed from the banks of the Nahmint River.

7.3 Area 3: Upland Slopes, Lower Nahmint (Figure 12)

Resource values

- Fish production is high within the river and its tributaries throughout this area.
- Timber values are moderate to high.
- Landscape values range from low to high as viewed from Nahmint Bay and several locations along the river and Nahmint mainline access road.

Recommended management prescriptions

- Roads must be constructed by or backhoe unless alternate equipment is necessary to protect the environment. Any use of alternative equipment must be approved in advance by the Ministry of Environment and the Federal Department of Fisheries and Oceans.
- Because of the presence of fine-textured soils in this area, extreme care must be taken to minimize sedimentation and avoid alteration of natural drainage patterns.
- No falling or yarding should be permitted across river channels or tributaries.
- Channels and tributaries should form a cutting boundary where possible.
- In addition, recommendations contained in the May 21, 1975 report *L.U.P.A.T. Results and Recommendations of a Selected Area - Nahmint* by R.B. Townshend of MacMillan Bloedel's Land Use Planning Advisory Team, must be strictly adhered to.
- Plan to maintain an undisturbed 60-metre-wide corridor on both sides of all 'class-one' waters in this area as a fisheries protection corridor. (Section 4.1.6).

7.4 Area 4: Canyon, Lower Nahmint River (Figure 13)

Resource values

- Timber values are low, based on poor timber quality and accessibility problems.
- Fisheries values are high due to the concentration of salmon and steelhead in the canyon pools.

Figure 11 Area 2: Nahmint estuary

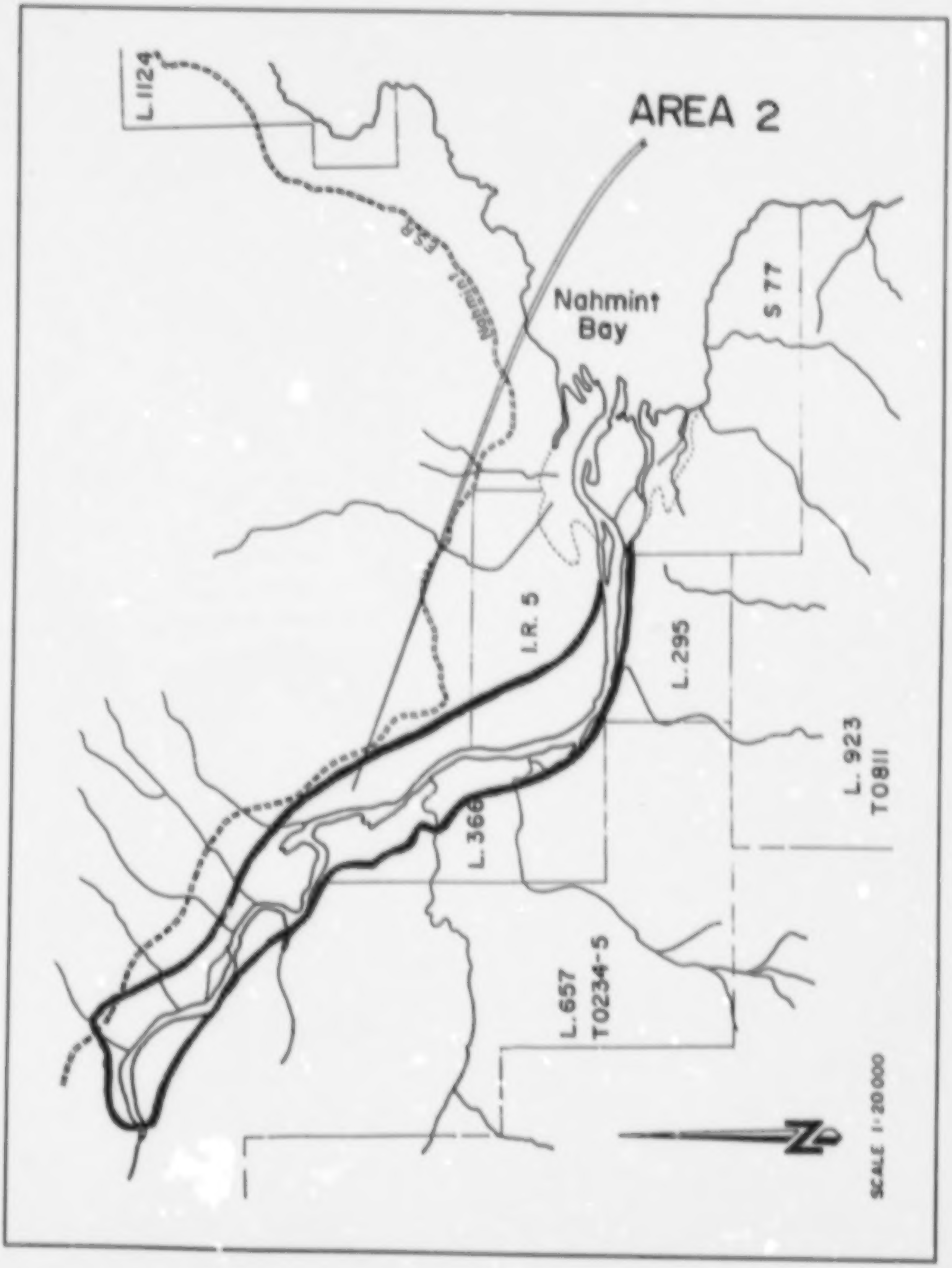
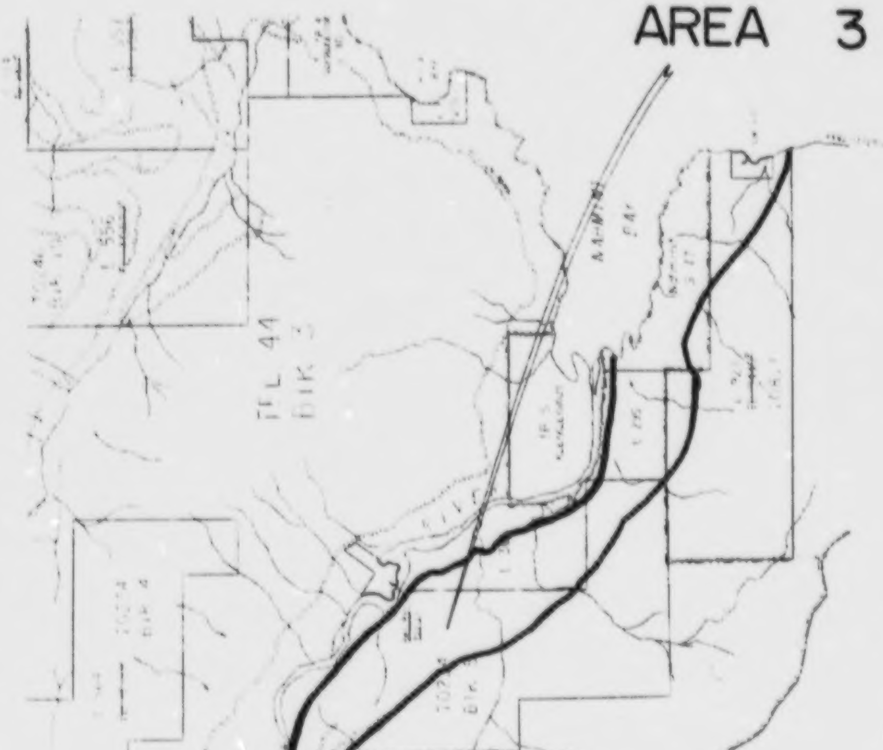

L.1124
AREA 2
Nahmint
Nahmint Bay
S 77
I.R. 5
L.295
L.923
TO811
L.366
L.657
TO234-5
N
SCALE 1:20000

Figure 12 Area 3: Upland slopes, lower Nahmint


AREA 3
TFL 44
BLK 3
NAHMINT
NAHMINT BAY
N
1 : 40 000

- Recreational values are high due to the aesthetic values of the canyon, coupled with the popularity of angling along this part of the river.

Recommended management prescriptions

- No logging must be allowed between the break in slope at the lip of the canyon and the river. This will protect both the river channel and the aesthetic appeal of the canyon.
- This area will be managed for a retention Visual Quality Objective as viewed from the river banks.

7.5 Area 5: Upland near confluence of Kanyon Creek and Lower Nahmint River (Figure 14)

Resource values

- Timber values are moderate.

Recommended management prescription

- This area was originally intended as a designated site for storing excess road fill. The principal road network in the lower Nahmint Valley is now complete and since there is no longer a need for such storage, this area should be deleted as a location of special interest.

7.6 Areas 6 and 17: Lower Nahmint River, upstream of Nahmint Canyon and Upper Nahmint River

(Figures 15 and 16)

- Fisheries values are high (steelhead, resident rainbow and Dolly Varden char).
- Recreational values are very high, due to the species complex and high aesthetic values associated with the riparian habitat as well as the opportunities for angling, hiking and camping in this area.

Recommended management prescriptions

- Plan all logging development with special care to maintain the quality fishing experience and other recreational values of the area.
- Plan to maintain an undisturbed 60-metre-wide corridor on both sides of all class one waters in this area as a fisheries protection corridor (Section 4.1.6).
- To ensure that future recreation site development options are protected, no harvesting is to occur on or adjacent to identified recreational sites within these areas.
- Develop streamside trails within the fisheries protection corridors throughout this area.
- The B.C. Ministry of Environment must implement 'fly fishing only' and catch and release regulations on the Nahmint River upstream from Nahmint Lake in order to maintain the fishing values and quality angling opportunities on the upper river.

7.7 Area 7: Biodiversity corridor system

Note: In the report of the 1975 Nahmint Study, Area 7 identified a system of permanent firebreaks within the valley. As discussed in Section 4.2.5.1, the purpose for such firebreaks has now been superseded by the objective of maintaining biodiversity throughout the drainage.

These areas are recommended as a biodiversity (wildlife) corridor system composed of both old-growth and advanced second-growth of varying age classes.

The biodiversity corridors will serve to maintain overall biological diversity throughout the valley by containing both plant and animal species indigenous to the area.

Resource values

- Timber and wildlife values will be variable depending on site characteristics.
- Biodiversity corridors will include both old-growth and advanced second-growth forest of varying age classes.
- Recreation values will also be variable throughout corridor areas. Opportunities may exist for a variety of activities, including hiking, wildlife viewing, hunting, plant and insect collection, wilderness appreciation, etc.
- Biodiversity corridors, along with streamside buffer zones, will serve to maintain overall biological diversity throughout the watershed by sheltering indigenous plant and animal species.

Recommended management prescriptions

- Biodiversity corridors will consist of a wide variety of representative types, ecosystem associations and wildlife habitats.
- Biodiversity corridors will be managed in order to retain advanced forest successional stages and will be recognized as being moveable, meandering, variable-width networks of ecosystems which traverse the full forest landscape.
- No forest harvesting shall occur within a corridor until Ministry of Environment wildlife managers decide that the adjacent logged areas have regrown sufficiently and been recolonized satisfactorily by the representative wildlife species which used the original corridor. In some cases, extended forest rotations will be necessary to address full wildlife recolonization.
- Replacement corridor areas must be generally characterized by closed canopy timber of at least 10 to 20 metres in height, indicating recolonization by late successional plants and wildlife.
- The number, length and cleared right-of-way width of all roads which must be constructed through biodiversity corridors will be kept to a minimum.
- The size, configuration, green-up and silviculture regime of any harvesting proposed in or adjacent to biodiversity corridors will be referred to representative wildlife agency staff and the Nahmint Watershed Follow-up Committee.
- Wherever suitable stand components are present, the edges of biodiversity corridors will be

Figure 13 **Area 4: Canyon, lower Nahmint River**

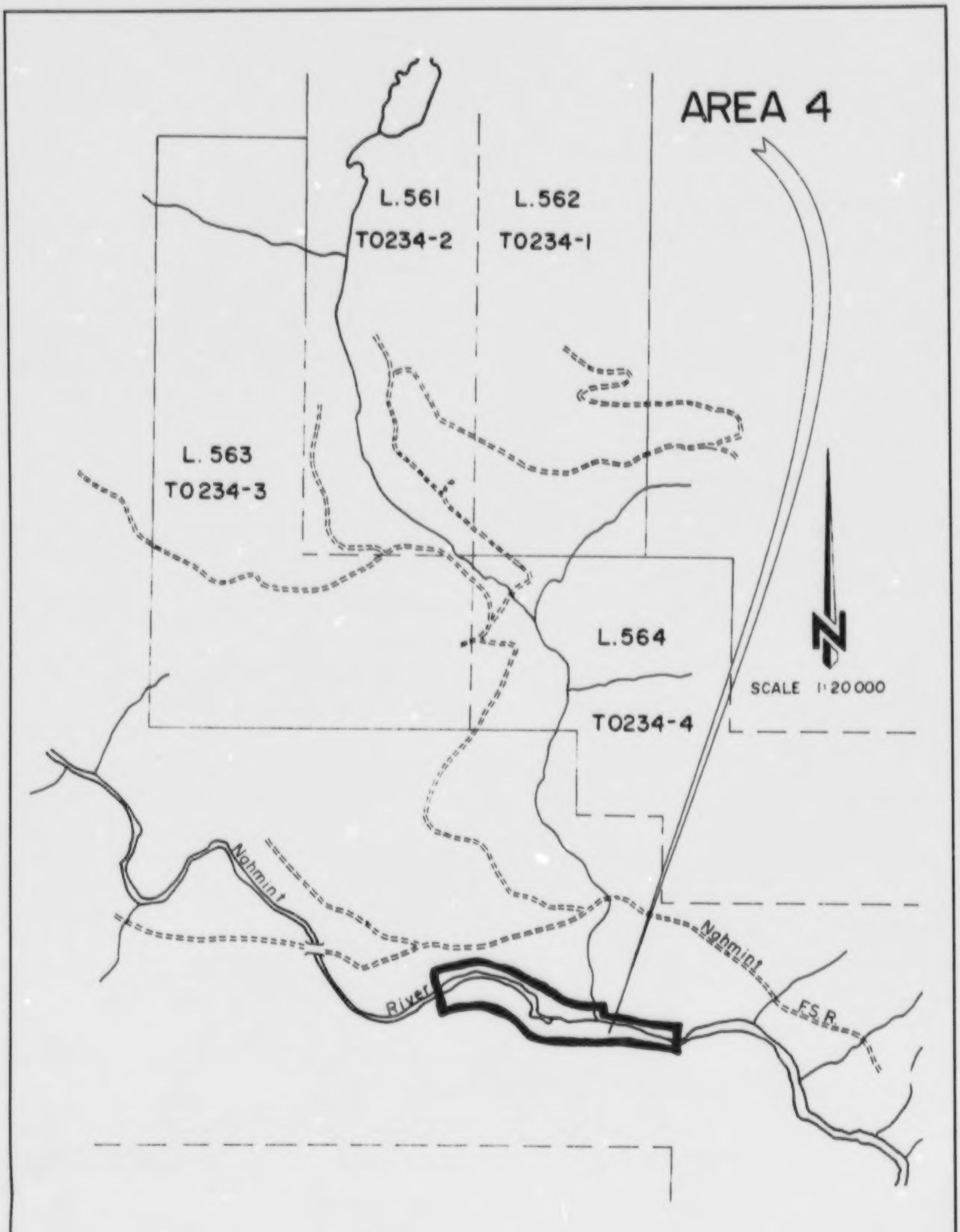

AREA 4
L.561
T0234-2
L.562
T0234-1
L. 563
T0234-3
L.564
T0234-4
SCALE 1:20000
N
Nahmint
River
Nahmint
F.S.R.

Figure 14 Area 4: Upland, near confluence of Kanyon Creek and lower Nahmint River

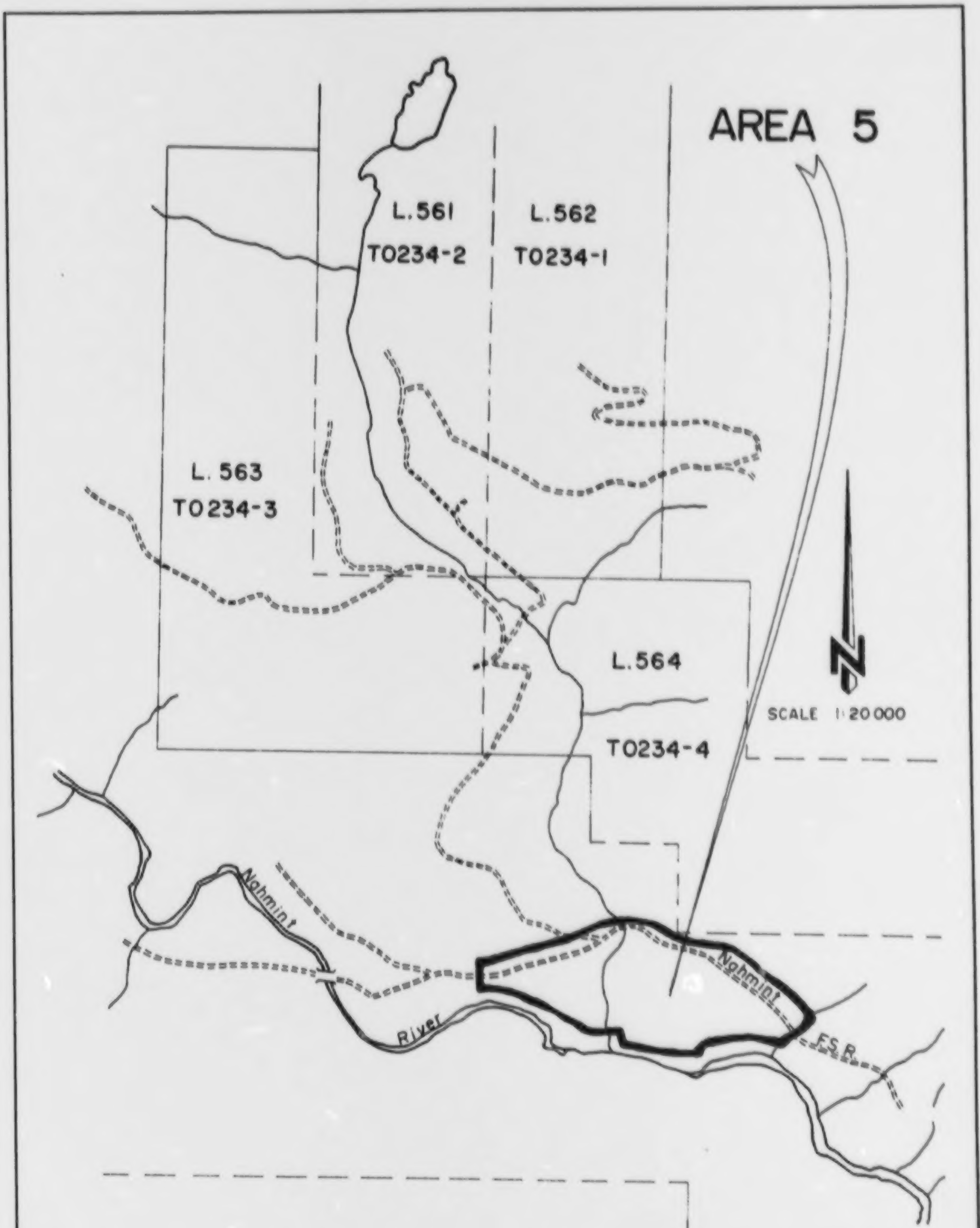

AREA 5
L.561
T0234-2
L.562
T0234-1
L.563
T0234-3
L.564
T0234-4
SCALE 1:20 000
N
Nahmint
River
Nahmint
F.S.R.

Figure 15 Area 6: Lower Nahmint River, upstream of Nahmint Canyon

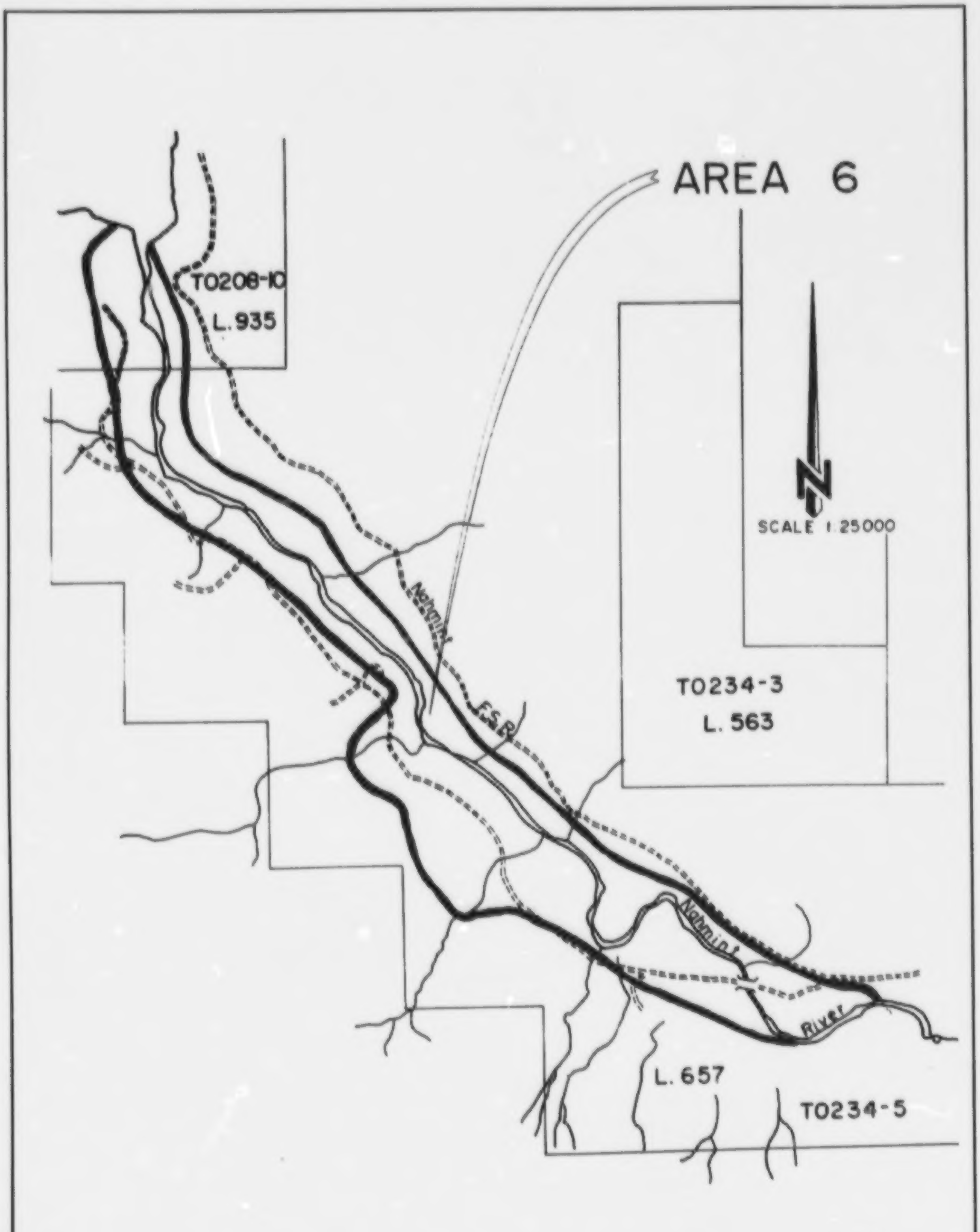
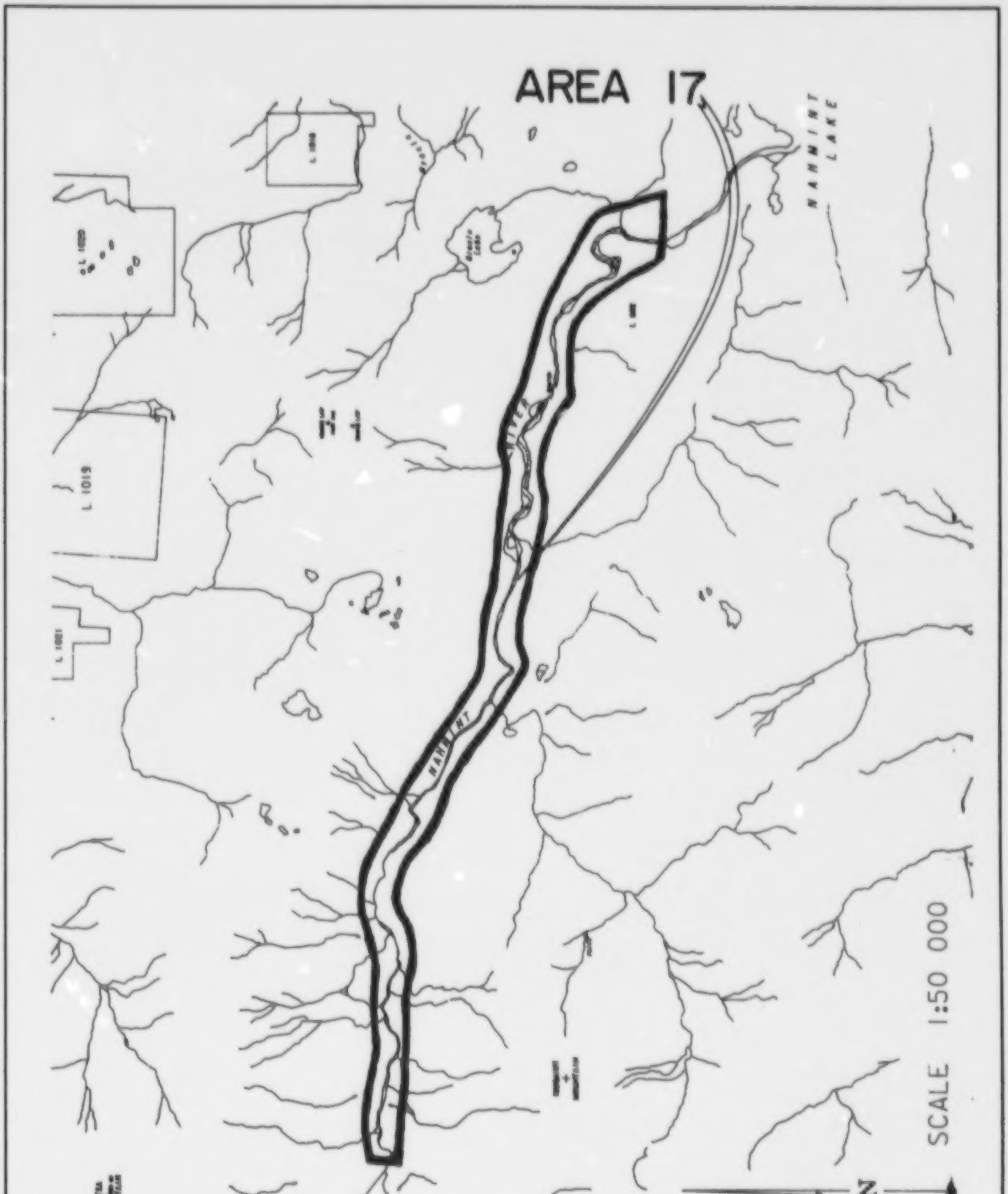

AREA 6
T0208-10
L.935
SCALE 1:25000
Nahmint
F.S.R.
T0234-3
L.563
Nahmint
River
L.657
T0234-5

Figure 16 Area 17: Upper Nahmint River


AREA 17
NAHMINT LAKE
NAHMINT RIVER
L 1019
L 1021
SCALE 1:50 000
N

managed to provide a tapered or feathered edge as opposed to an abrupt boundary of standing timber. The tapered edges should retain a sufficient portion of the original basal area - proportioned between merchantable and non-merchantable co-dominant, intermediate and suppressed components of the original stand - to provide a wind-deceleration zone, contribute to biodiversity and aid recolonization of the harvested area by wildlife.

- Corridors can be variable in width, but should have sufficient width in appropriate areas to meet the needs of wildlife species which require forest conditions that are not influenced by edge effects present near openings and vegetation type-changes.
- Should blowdown occur in or adjacent to a biodiversity corridor, efforts will be made to remove as much windthrown timber as wildlife managers consider appropriate, without removing adjacent live standing trees.
- As an alternative to rotational logging around ungulate winter ranges which are located in biodiversity corridors, long-term spring forage production areas adjacent to or within biodiversity corridors will be maintained by applying silvicultural practices such as spacing and pruning.
- Plan to maintain an undisturbed 60-metre-wide corridor on both sides of all class one waters in this area in the form of a fisheries protection corridor (Section 4.1.6).

7.8 Area 8: Nahmint Lake (Figure 17)

Resource values

- Recreation values are extremely high. The lake provides angling, canoeing and viewing opportunities. Intimate camping and picnicking experiences are associated with the pocket beaches.
- Landscape values are high along the shoreline interface.

Recommended management prescription

- A substantial visual buffer must be retained along the entire shoreline to preserve the aesthetic quality of the lakeshore (see Area 9).
- Restrict the motor size for power boats using the lake to maintain it as a relatively tranquil area for angling, boating, canoeing and camping.
- Do not construct log catch booms at either the inlet or outlet of Nahmint Lake. Large logging debris must not be allowed to enter waters that may carry it into the lake. Since natural debris (uprooted and windfallen trees and similar material) is a valuable source of organic material, important to the ecological balance of the lake and lower river. It should be allowed to pass unhindered through the system.

7.9 Area 9: Lakeshore surrounding Nahmint Lake except for areas 10, 11, and 15 (Figure 17)

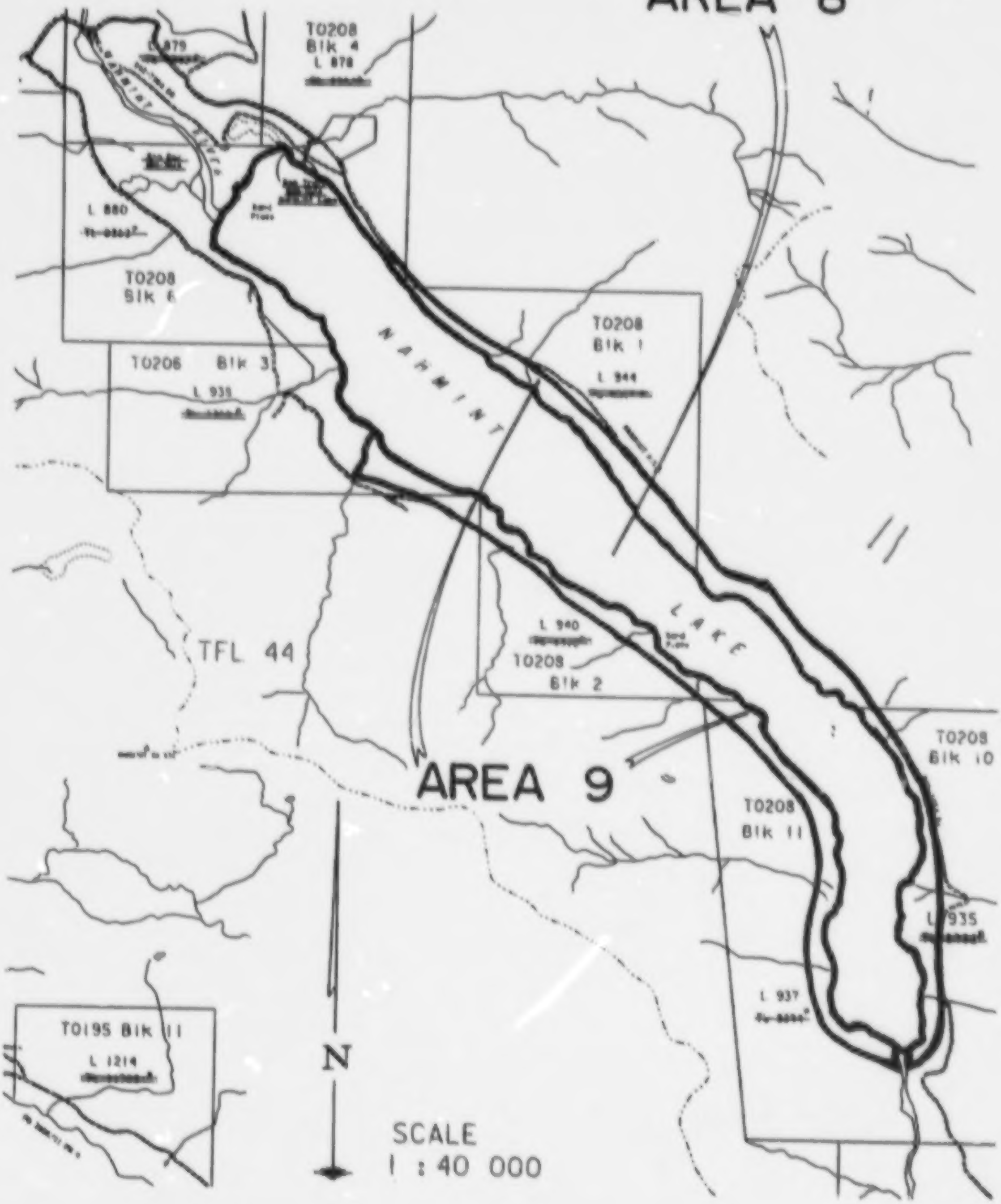
Resource values

- Recreation values of the lakeshore forest surrounding the lake are extremely high. Campers, picnickers, hunters, anglers, boaters, and sightseers all make the lakeshore their destination in the valley.
- Recreational fishing values associated with the lakeshore are very high, due to spawning by Dolly Varden char in the lower reaches of several creeks that flow into the lake.

Recommended management prescriptions

- Extend the boundaries of Area 9 entirely around the shore of Nahmint Lake, excluding only those areas already included in Areas 6, 7, 10, 11, and 15 (Map 1).
- This area will be managed for a 'retention' Visual Quality Objective as viewed from the lake surface.
- Confirm the upland boundaries of Area 9 in the field through joint assessment by representatives of the Department of Fisheries and Oceans, Ministry of Environment, Ministry of Forests and MacMillan Bloedel Ltd.
- In order to preserve the recreational, limnological, aesthetic and fisheries values associated with Nahmint Lake, the upland boundaries must be established according to the following criteria:
  - on the east side of Nahmint Lake, the boundary will be the existing 'Nahmint mainline' access road;
  - elsewhere around the lake the boundary will follow the most windfirm location at the lip of the first principal break in terrain from the lake, or 120 metres from the lake, whichever is greater;
  - the fisheries protection corridors described in section 4.1.4 will be incorporated within the boundaries of Area 9 immediately surrounding the shoreline on Nahmint Lake; and
  - Outside the 60-metre lakeside fisheries protection corridors in Area 9, occasional selection harvests may be approved, provided that no opening created in the forest canopy may be greater than one hectare. The rate of harvest in this area must be based on a planned rotation period of at least 150 years. This is to protect the lower reaches of tributaries draining into the lake, intercept downslope debris movement, protect natural lakeside processes and important shoal water areas, as well as to maintain the natural state of lakeshore forest.
- Considering the overall sensitivity of Area 9 it is essential that the proposed Nahmint Follow-up Committee review the boundaries of Area 9 as

Figure 17 Area 8 and 9: Nahmint Lake and lakeshore surrounding mid and lower Nahmint Lake


AREA 8
L 879
T0208
Blk 4
L 878
L 880
T0208
Blk 6
T0206 Blk 3
L 935
T0208
Blk 1
L 944
NAHMINT
LAKE
L 940
T0208
Blk 2
TFL 44
AREA 9
T0208
Blk 10
T0208
Blk 11
L 935
L 937
T0195 Blk 11
L 1214
N
SCALE
1 : 40 000

well as all plans within it and advise the resource managers of the development of further site-specific prescriptions so that the high recreational and fisheries values are dealt with according to the standards expected by the public.

7.10 Areas 10, 11 and 15: Lands bordering head of Nahmint Lake (Figure 18)

Resource values

- Recreation values range from high to extremely high due to the combination of existing trails, sandy beaches, attractive creek and river estuaries, river canyon and pools, waterfalls, large timber with sparse undergrowth, and dry, spacious lakeside terraces suitable for campsite location.
- Landscape values associated with the riverbank and lakeshore are high.
- Wildlife values are very high due to the presence of high-quality elk winter range.

Recommended management prescriptions

- To preserve the recreational and aesthetic values of this area, no harvesting will occur; instead, the area should be designated as a Forest Service Recreation Site.
- Invite the Ministry of Parks to study the potential of the area as an addition to the provincial parks system.
- As much as possible, limit access within this area to the use of boats and foot trails only.
- All the recreation improvements listed below must be planned and implemented in accordance with the Recreation Management Plan to be completed by December 31, 1991:
  - improve the existing trail to the lakeshore in the vicinity of Anderson Creek and construct a short access trail to the base of Anderson Falls;
  - construct a parking area for motor vehicles adjacent to the trailhead on Nahmint mainline access road;
  - develop a vehicle-unit campsite adjacent to the existing water-tanker access road on the west side of Nahmint River, near its confluence with the lake;
  - develop the Blackies' Beach site on the west side of Nahmint Lake (Figure 16, Area 11) as a boat and trail access site for picnicking and camping;
  - construct tent pads behind the beach to Forest Service standards;
  - construct an open picnic shelter to provide cover for campers during wet weather; and,
  - plan to maintain an undisturbed 60-metre-wide corridor on both sides of all class one waters in this area in the form of a fisheries protection corridor (Section 4.1.6).

7.11 Areas 12 and 13: Wildlife Winter Range Kanyon Creek (Figure 19)

Resource values

- Wildlife values are high. These areas provide shelter and forage for blacktail deer in times of heavy snowfall, as well as year-round forest cover and diverse habitat for deer, black bear, furbearers and cavity-nesting birds.
- Timber values are moderate.

Recommended management prescriptions

- Defer timber harvesting in these areas until alternate winter range is available.
- Establish a windfirm leave strip around the rocky ridge within Area 13 in order to maintain its capability as deer winter range. The location of the leave strip must be determined through an on-site assessment between the tree farm licensee, the Ministry of Forests and the Ministry of Environment.
- Rotational logging will be required adjacent to Areas 12 and 13 and the biodiversity corridors in the vicinity of these areas. The long-term harvest schedule must be determined through consultation among representatives of the tree farm licensee, the Ministry of Environment and the Ministry of Forests. This schedule must be completed by December 31, 1991, and once established should form part of the Management and Working Plan for TFL 44.
- Where rotational logging is not possible around designated winter ranges, the Tree Farm Licensee must maintain continual forage production in selected areas through silvicultural activities, such as spacing and pruning of immature stands to enhance wildlife forage production.

7.12 Area 14: Gracie Lake (Figure 20)

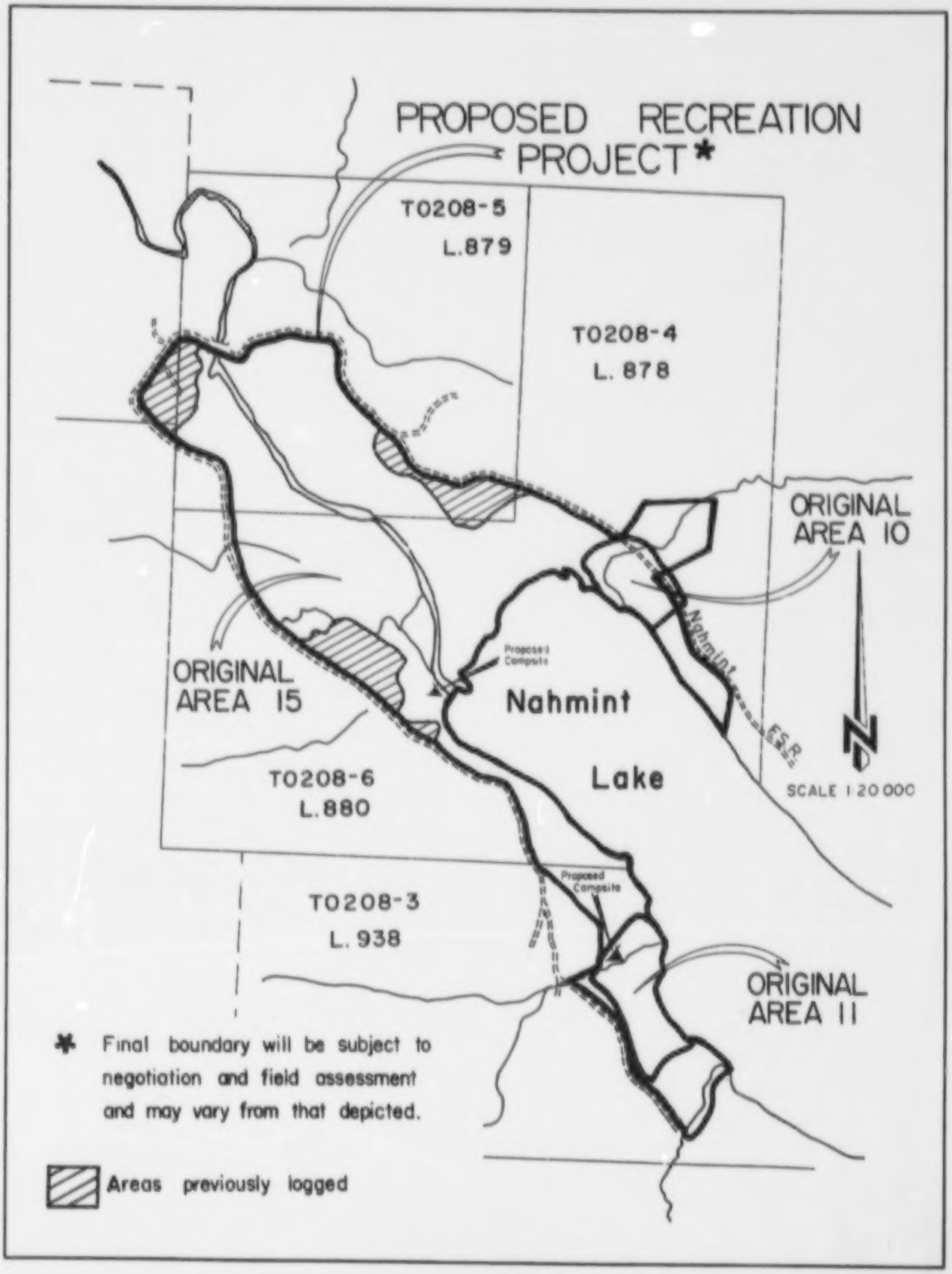
Resource values

- Recreation values are high because of the available angling, canoeing and picnicking opportunities.
- Landscape values are high due to the presence of several scenic viewpoints in the vicinity.

Recommended management prescriptions

- Boats should be restricted to the use of electric motors, only in order to maintain the natural character of this small, tranquil lake.
- Designate the north end of Gracie Lake as a Forest Service recreation site to facilitate site improvements.
- Improve the existing picnic site at the north end of the lake by expanding the parking area and installing pit toilets and appropriate picnic tables.

Figure 18 Areas 10, 11 and 12: Lands bordering head of Nahmint Lake


PROPOSED RECREATION PROJECT*
T0208-5
L.879
T0208-4
L. 878
ORIGINAL AREA 10
Nahmint
E.S.R.
SCALE 1:20 000
ORIGINAL AREA 15
Proposed Campsite
Nahmint
Lake
T0208-6
L.880
Proposed Campsite
T0208-3
L. 938
ORIGINAL AREA 11
▨ Areas previously logged

* Final boundary will be subject to negotiation and field assessment and may vary from that depicted.

- Pay special care to landscape management in planning future logging that will be visible from the surface of Gracie Lake and the roadside viewpoints in the vicinity.
- The shoreline areas of Gracie Lake will be managed for a 'retention' Visual Quality Objective.

7.13 Area 16: Nahmint River bridge site (Figure 21)

- This area as shown on the 1975 maps is no longer relevant since the bridge crossing the Nahmint River is now built. Special reference to the area should be dropped from future plans. In its place, all relevant general recommendations, in this report, including the proposed fisheries management corridors, must apply.

7.14 Area 18: Upper Nahmint River valley (Map 1)

Resource values

- Recreation values are high, beacuse of the alpine meadows of the Gibson Klitsa plateau, the angling opportunities in the upper river and Beverly Creek and the potential hiking, camping, hunting and wildlife viewing in the upper Nahmint Valley.
- Landscape values vary from low to high.
- Timber values are moderate to high.

Recommended management prescriptions

- The Ministry of Forests will study Nahmint Mountain, the Gibson-Klitsa plateau and key sub-alpine areas to determine their potential for designation as a wilderness area within TFL 44. Meanwhile, no harvesting will be planned within the proposed study area (Map 1).
- Ensure that the Recreation Management Plan for Nahmint Valley includes plans and schedules for:
  - developing an access trail into the Gibson-Klitsa plateau and trails and routes throughout the alpine area; and
  - responding to increased recreational use of the upper Nahmint Valley by scheduling recreation site development in connection with increased use.
- Even though the upper Nahmint Valley will likely have fewer visitors than the Nahmint Lake vicinity, the aesthetic values and landscape sensitivity of the forested slopes in this area mean that landscape management principles must apply.
- The Ministry of Environment will complete fish inventories and confirm the limits of class 1 waters in the upper Nahmint River, by December 31, 1991.
- Plan to maintain an undisturbed 60-metre-wide corridor on both sides of all class one waters in this area in the form of a fisheries protection corridor (Section 4.1.6).
- Those portions of area 18 which have low or moderate landscape will be managed for a 'modification' Visual Quality Objective

7.15 Area 19: Avalanche slopes and waterfalls in Upper Nahmint Valley (Figure 22)

Resource values

- High recreation and aesthetic values are associated with impressive waterfall feature. Possibility of wildlife viewing with presence of elk in upper watershed.
- The slide alder complexes on the south slope of the river provide exceptional spring, summer and fall range for elk. Black bear use of this area during these seasons is also significant.
- The mature conifer stands on the relatively flat terrain on the north side of the river provide elk winter range, in addition to the relatively small amount of high-quality winter range at the head of Nahmint Lake.

Recommended management prescriptions

- Preserve the integrity of waterfall landscape by applying landscape-management principles.
- Develop a hiking trail into base of waterfall once the Nahmint mainline road approaches this area.
- This unit will be managed for a 'retention' Visual Quality Objective.
- Management of the conifer stands adjacent to the slide alder complexes on the south side of the river will consider elk and deer requirements for cover adjacent to these relatively open forage areas.
- Timber harvesting adjacent to the north shore of the river will not occur until a more detailed analysis of winter range value can be made.

Figure 19 Areas 12 and 13: Wildlife winter range, Kanyon creek

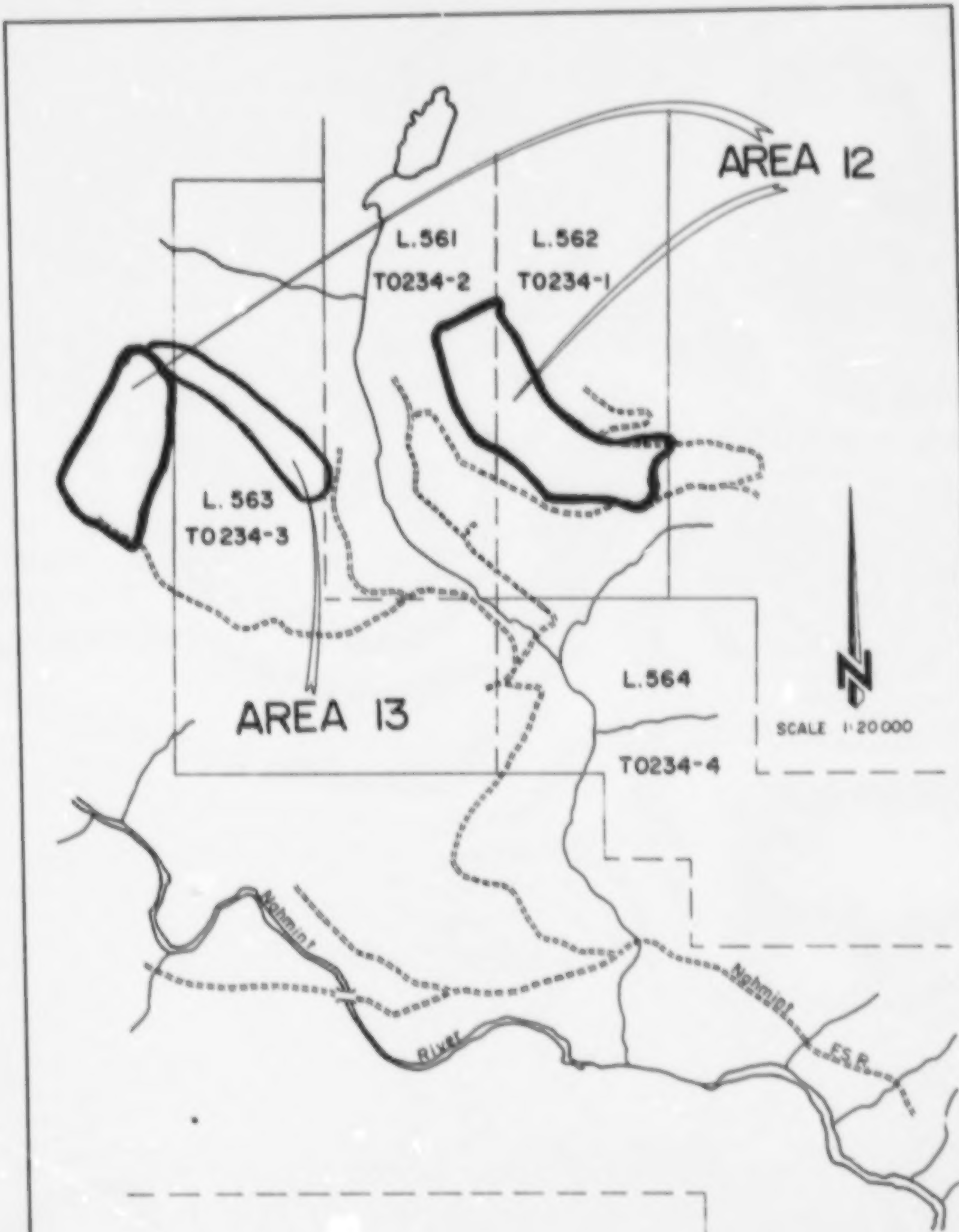

AREA 12
L.561
T0234-2
L.562
T0234-1
L. 563
T0234-3
AREA 13
L.564
T0234-4
N
SCALE 1:20 000
Nahmint
River
Nahmint
F.S.R.

Figure 20 Area 14: Gracie lake

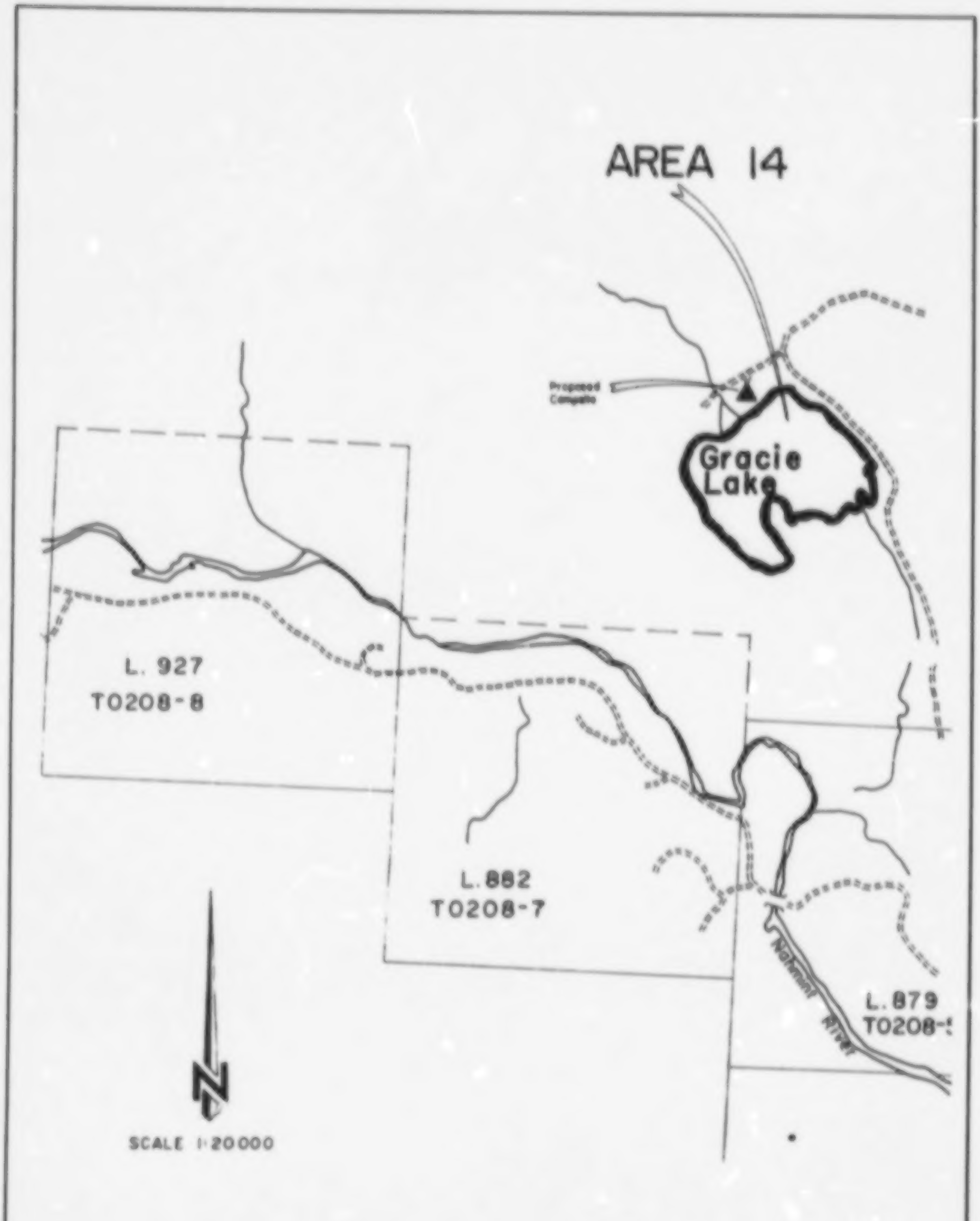

AREA 14
Proposed Campsite
Gracie Lake
L. 927
T0208-8
L. 882
T0208-7
L. 879
T0208-
Nahmint River
N
SCALE 1:20000

Figure 21 Area 16: Nahmint river bridge

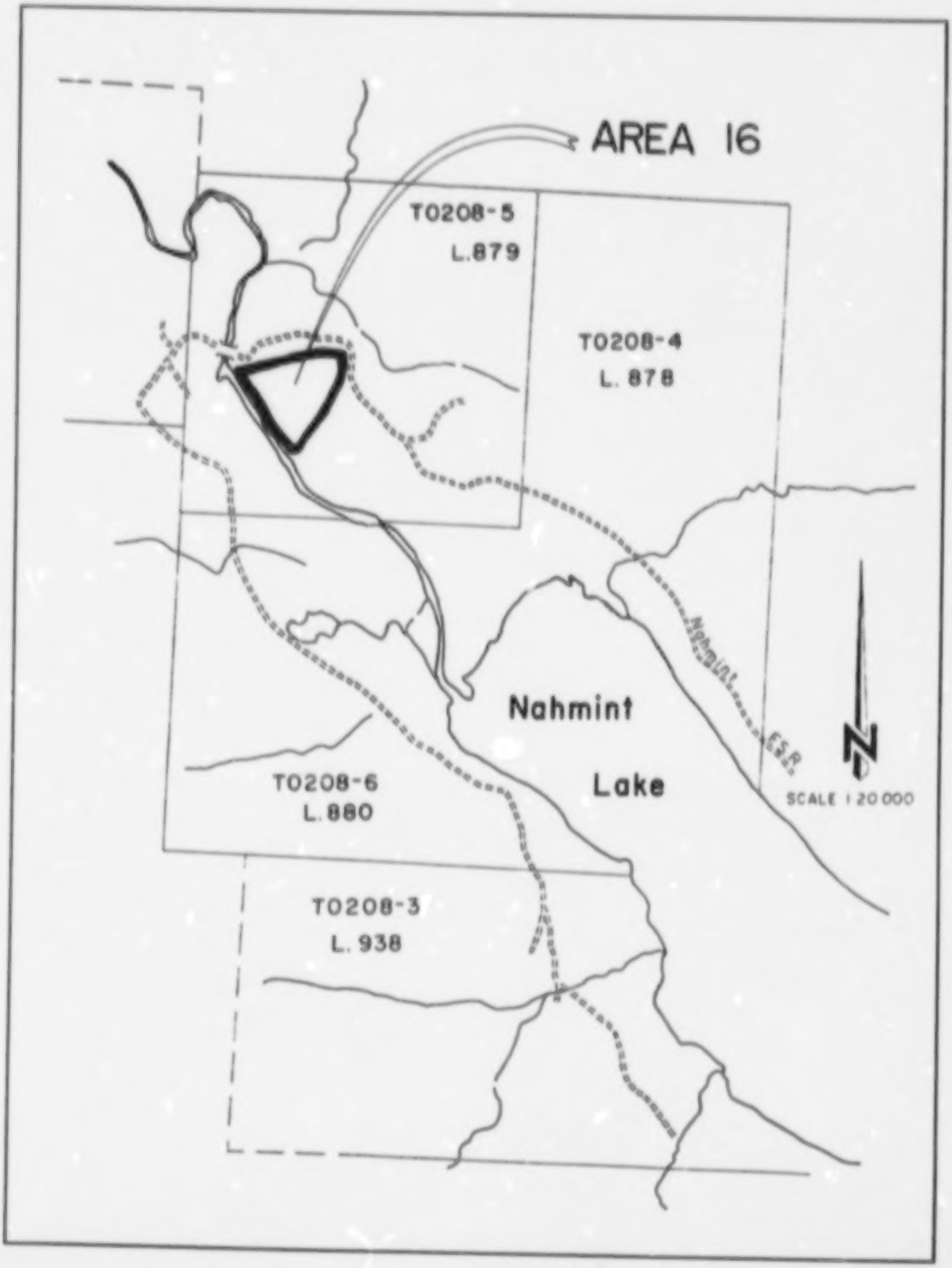

AREA 16
T0208-5
L.879
T0208-4
L. 878
Nahmint
Lake
T0208-6
L.880
T0208-3
L. 938
Nahmint
E.S.R.
N
SCALE 1:20 000

Figure 22 Area 19: Avalanche slopes, upper Nahmint valley

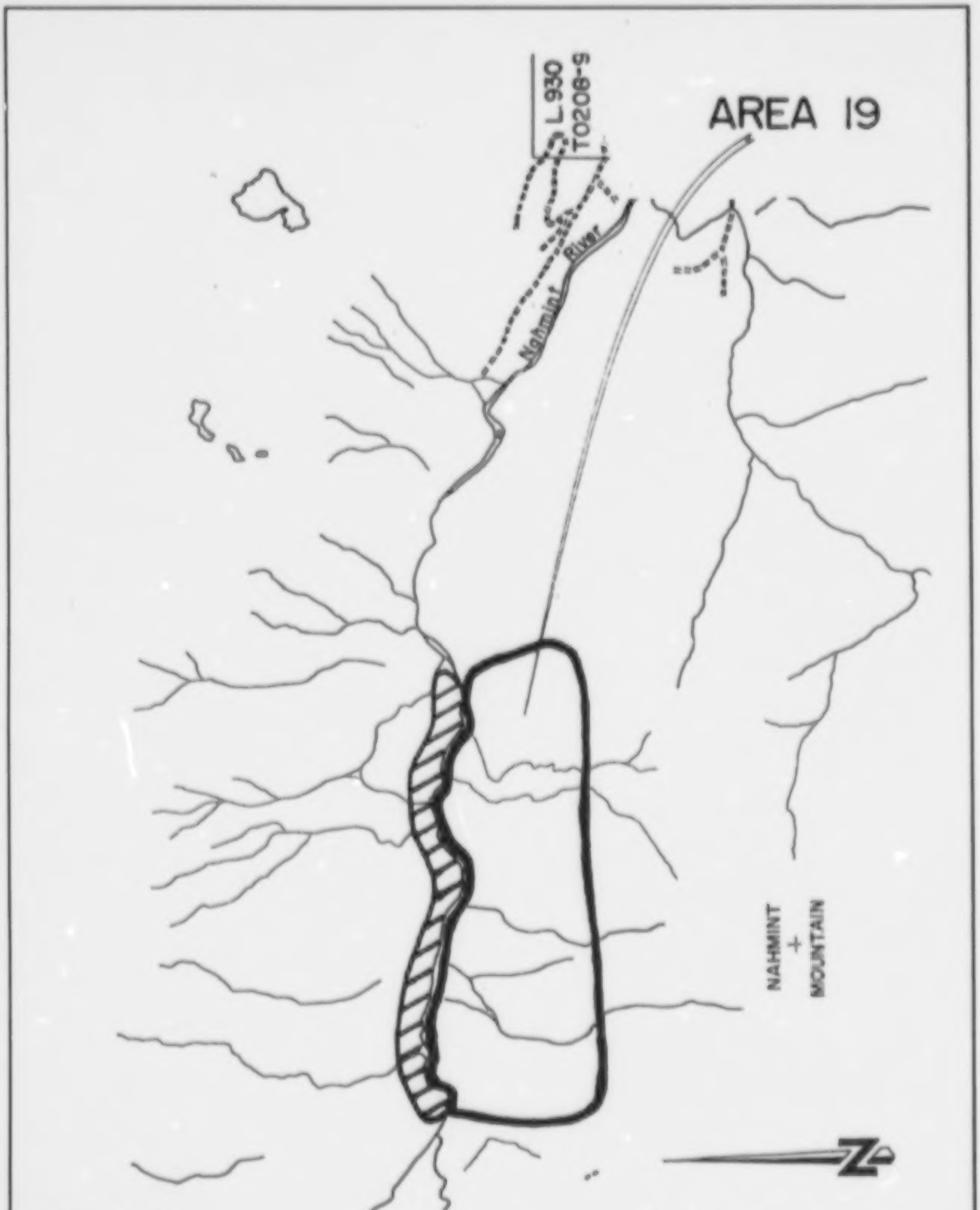
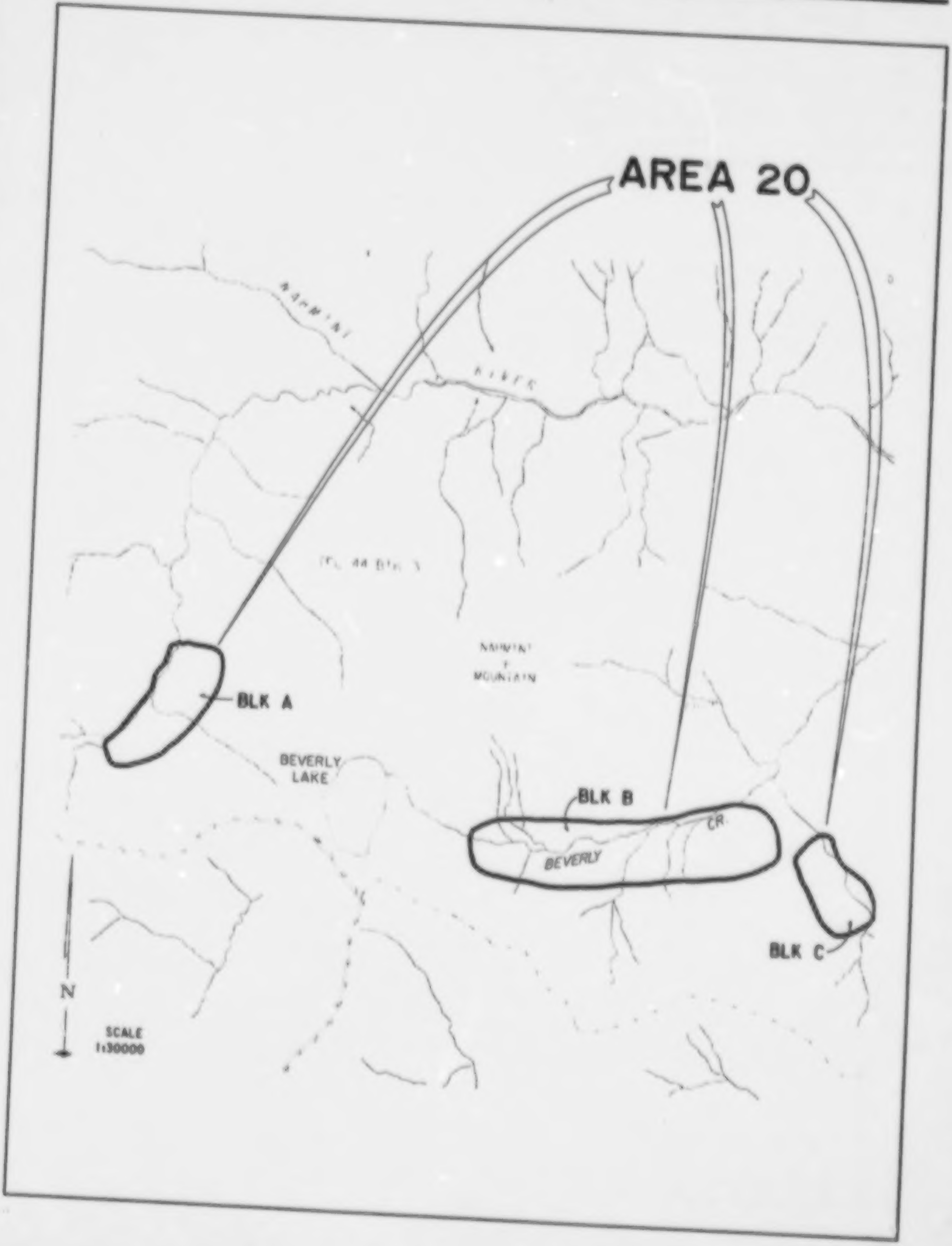

L 930
T0208-9
AREA 19
Nahmint River
NAHMINT
+
MOUNTAIN
N
SCALE 1:25 000

Figure 23 Area 20: Elk range, upper Nahmint valley and Beverly creek


AREA 20
NAHMINT
RIVER
TFL 44 BLK 3
NAHMINT
MOUNTAIN
BLK A
BEVERLY
LAKE
BLK B
BEVERLY
CR.
BLK C
N
SCALE
1:30000

7.16 Area 20: Elk range, Upper Nahmint Valley and Upper Beverly Creek (Figure 23)

Resource values

- Wildlife values are high, the open canopies and moist, rich soils typical of these sites provide abundant, preferred elk foraging areas. The adjacent old-growth stands also provide security and thermal cover. Area 20-B in upper Beverly Creek offers abundant forage as well.

Recommended management prescriptions

- Access roads will not bisect these slide alder complexes.
- Adjacent coniferous stands will be managed to maintain the integrity of these special habitats.[1]

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[1] *Deer and Elk Habitats in Coastal Forests of Southern British Columbia.* British Columbia Ministry of Forests November 1990 ..

Glossary of forestry terms

1. Most of the definitions in this glossary have been published in a booklet by Forestry Canada, Pacific and Yukon Region. It originally appeared as an appendix to *Managing Your Woodland: a non-forester's guide to small scale forestry in British Columbia*, published under the Canada-British Columbia Forest Resource Development Agreement (FRDA)

   It is available from:

   Forestry Canada
   Pacific and Yukon Region
   Pacific Forestry Centre
   506 West Burnside Road
   Victoria, British Columbia
   V8Z 1M5
   Phone (604) 388-0600

Advanced regeneration:

Trees that have become established naturally under a mature forest canopy and are capable of becoming the next crop after the mature crop is removed.

Age class:

Any interval into which the age range of trees, forests, stands or forest types is divided for classification and use. Forest inventories commonly group trees into 20-year age class groups.

Allowable annual cut (AAC):

The average volume of wood which may be harvested annually under sustained yield management. Roughly equal to the amount of new growth produced by the forest each year, including a proportion of the mature volume less deductions for losses due to fire, insects and disease.

Artificial regeneration:

Establishing a new forest by planting seedlings or by direct seeding (as opposed to natural regeneration).

Basic silviculture:

A term used by the Ministry of Forests to refer to the silviculture treatments that are carried out to ensure the establishment of a free-growing tree crop. May include: surveying, site preparation, planting, direct seeding, or brushing . See also 'intensive silviculture'.

Biodiversity:

The range of variety within and among all the species living in a given area.

Biogeoclimatic classification:

The delineation of biotic regions or zones on the basis of vegetation, soils, topography, and climate.

Biological maturity:

In stand management, the age at which trees or stands have peaked in growth rate and are determined to be merchantable. See also 'rotation age'.

Broadcast burning:

A controlled burn, where the fire is intentionally ignited and allowed to proceed over a designated area within well-defined boundaries, for the reduction of fuel hazard or for site preparation. Also called slash burning.

Brushing:

A silviculture treatment to remove brush and weed species which compete with seedlings for sunlight, water, and soil nutrients. See also 'conifer release'.

Buffer strip:

A strip of land (often including undisturbed vegetation) where disturbance is not allowed or is closely monitored to preserve or enhance aesthetic and other qualities along or adjacent to roads, trails, watercourses and recreation sites.

Canopy:

The forest cover of branches and foliage formed by tree crowns.

Clearcutting:

The harvesting of all trees from an area of forest land in a single cut.

Climax forest:

A forest community that represents the final stage of natural forest succession for its locality, i.e. for its environment. Often identified as those forests that can reproduce indefinitely, i.e. in their own shade.

Close utilization:

Maximum stump height of 30 cm; minimum top diameter, inside bark (d.i.b.) of 10 cm. See also 'utilization standards'.

Closed canopy:

The description given to a stand when the crowns of the main level of trees forming the canopy are touching and intermingled so that light cannot reach the forest floor.

Codominant:

In stands with a closed canopy, those trees whose crowns form the general level of the canopy and receive full light from above, but comparatively little from the sides. In young stands, those trees with above-average height growth.

Commercial thinning:

A silviculture treatment that 'thins' out an overstocked stand by removing trees that are large enough to be sold as products such as poles or fence posts (as opposed to juvenile spacing). It is carried out to improve the health and growth rate of the remaining crop trees.

Coniferous:

Cone-bearing trees having needles or scale-like leaves, usually evergreen, and producing wood known commercially as 'softwood'.

Conifer release:

To release established coniferous trees from a situation in which they have been suppressed, by thinning out undesirable trees and shrubs which have overtopped them. Carried out to improve the growth of the coniferous trees released. See also 'brushing'.

Crop tree:

A tree in a young stand selected to be retained until final harvest.

Crown

The live branches and foliage of a tree.

Crown land:

Land that is owned by the Crown, or province. Referred to as federal Crown land when it is owned by Canada, e.g. Indian reserves, Dept. of National Defence Lands.

Culvert:

A drain or covered channel that crosses under a road to lead water from the upper to the lower side.

Cut bank:

The excavated ban from a ditch line to the top of the undisturbed slope of a road.

Cutblock:

A specific area with defined boundaries authorized for harvest.

Cutting permit:

The document that contains the authority to harvest trees on a woodlot licence.

Cut period:

The interval between major harvesting operations in the same stand.

Deciduous:

Term applied to trees, commonly broadleaf, that usually shed their leaves annually. Also known commercially as hardwoods.

Development objectives:

The short-term (often 5-year) planning objectives for a specific management area.

Dominant:

Trees with crowns extending above the general level of the canopy and receiving full light from above and partly from the side; taller than the average trees in the stand with crowns well developed.

Environmentally sensitive areas (ESA):

ESAs for forestry include potentially fragile or unstable soils that may deteriorate unacceptably after forest harvesting, and areas of high value to non-timber resources such as fisheries, wildlife, water, and recreation.

Even-aged:

A forest stand or forest type in which relatively small (10-20 year) age differences exist between individual trees. Even-aged stands are often the result of a single regeneration event such as clearcutting or a seed cutting in the shelterwood method.

Felling:

The act of cutting down a standing tree.

Fertilization:

The addition of fertilizer to promote tree growth on sites deficient in one or more soil nutrients. Also used to improve the vigor of crop trees following juvenile spacing or commercial thinning.

Fill bank:

The fill material used to shape a road from the outer edge of the travelled portion to its intersection with the existing ground profile.

Fill-in planting:

Planting required to supplement poorly-stocked natural regeneration or to replace seedlings that have died on previously planted sites.

Firebreaks:

Areas or strips of less flammable fuels that are either natural (standing timber or landslides) or are made in advance (cat trails or roads), as precautionary measures separating areas of greater fire hazard.

Fisheries sensitive zones:

Aquatic environments important for the life history of fish, including areas which may not be defined as streams. May include: side and flood channels, swamps, seasonally flooded depressions, lake spawning areas or estuaries.

Fluvial:

Produced by or found in a river or creek.

Forest:

A plant community predominantly of trees and other woody vegetation growing more or less closely together.

Forest cover map:

A map showing relatively homogeneous forest stands or cover types produced from the interpretation of aerial photos and information collected in field surveys. Commonly includes information on species, age class, height class, site, and stocking level.

Forest ecology:

The relationships between forest organisms and their environment.

Forest inventory:

A survey of a forest area to collect such data as area condition, timber volume and species, for specific purposes such as planning, purchases, evaluation, management, or harvesting.

Forest management cycle:

The phases that occur in the management of a forest, including harvesting, site preparation, reforestation, and stand tending.

Forest management plan:

A general plan for the management of a forest area, usually for a full rotation cycle, including the objectives, prescribed management activities and standards to be employed to achieve specified goals. Commonly supported with more detailed Development Plans.

Forest renewal:

The renewal of a tree crop by either natural or artificial means.

Forest type:

A group of forested areas or stands of similar composition (species, age, height, and stocking) which differentiates it from other such groups.

Forest type labels:

The symbols which are used to code information about forest types on a forest cover map, e.g. site, disturbance, age and height class, species, and stocking.

Free-growing:

Young trees that are as high or higher than competing brush vegetation with one metre of free-growing space surrounding their leaders.

Fuel management:

The activities carried out to modify fuel accumulations (slash) to reduce the chance of ignition and rate of fire spread.

Girdling:

To kill a tree by severing or damaging the cambium layer and interrupting the flow of food between the leaves and the rest of the tree. A method of 'brushing' carried out using a hatchet or special tool to cut through the bark and cambium of the tree.

Grapple yarder:

A machine used in harvesting to bring logs into a landing. The grapple closes like teeth around the log and is controlled by the machine operator.

Green belt:

A strip of undisturbed soil and vegetation left along waterways or access routes to minimize the environmental impact from development. See also 'buffer strip'.

Gross total volume:

Volume of the main stem of the tree, including stump and top. Volume of the stand, including all trees.

Habitat:

The place where an organism lives and/or the conditions of that environment, including the soil, vegetation, water, and food.

Habitat management:

Management of the forest to create environments which provide habitats (food, shelter) to meet the needs of particular species of wildlife, birds, etc.

Hack and squirt:

A method of conifer release and juvenile spacing where the bark of a tree is cut (hack) and herbicides are injected (squirt) to kill the tree.

Harvest cut:

The felling of the mature crop of trees, either as a single clearcut or a series of regeneration cuttings.

Harvesting:

The cutting and removal of trees from a forested area.

Height class:

Any interval into which the range of tree heights is divided for classification and use, commonly 3m, 5m, or 10m classes.

Highlead system:

Logging system that uses cables rigged to a spar high above the ground so that one end of the logs can be lifted during yarding.

Improvement cutting:

The removal of trees of undesirable species, form or condition from the main canopy of the stand to improve the health, composition and value of the stand.

Incremental silviculture:

See 'intensive silviculture'.

Integrated forest companies:

Forest companies that both produce logs and manufacture them into lumber, pulp, and other wood products.

Integrated resource management:

The management of two or more resources in the same general area, commonly includes water, soil, timber, range, fish, wildlife, and recreation.

Intensive silviculture:

A Ministry of Forests term that refers to the treatments carried out to maintain or increase the yield and value of forest stands. Includes treatments such as site rehabilitation, conifer release, spacing, pruning, and fertilization. Also known as incremental silviculture. See also 'basic silviculture'.

Intertree distance:

The distance between tree crowns, usually used in the context of thinning. Recommended guidelines for intertree distances are established for different thinning programs depending on site variables, the species and age of trees, and management objectives.

Juvenile spacing:

A silvicultural treatment to reduce the number of trees in young stands, often carried out before the stems removed are large enough to be used or sold as a forest product. Prevents stagnation and improves growing conditions for the remaining crop trees so that at final harvest the end-product quality and value is increased. See also 'commercial thinning'.

Landing:

The area where logs are collected for loading.

Litter layer:

The layer of organic debris, mainly bark, twigs, and leaves, on the forest floor.

Littoral zone:

Pertaining to the shore of a lake, sea or ocean.

Logging plan:

A schedule of operations for a specific area that describes in words and on a map how and where harvesting will take place.

Loss factors:

Reductions made to gross volumes to allow for decay, waste, and breakage.

MAI (mean annual increment):

The average annual increase in volume of individual trees or stands up to the specified point in time. The MAI changes with different growth phases in a tree's life, being highest in the middle years and then slowly decreasing with age. The point at which the MAI peaks is commonly used to identify the biological maturity of the tree and its readiness for harvesting.

Management area:

Stands or forest types that require similar management practices and can be grouped for treatment as a management unit.

Managed forest land:

Forest land that is being managed under a forest management plan.

Management objectives:

The long-term management strategies for the forest area.

Map folio:

A series of maps bound together, often produced as overlays of information, e.g. soils, fish, water, forest, and wildlife.

Merchantable timber:

A tree or stand that has attained sufficient size, quality and/or volume to make it suitable for harvesting.

Merchantable volume:

The amount of sound wood in a single tree or stand that is suitable for marketing under given economic conditions.

Microclimate:

Generally the climate of small areas, especially this differs significantly from the general climate of the region. Stands often create microclimates.

Microsite:

A small area which exhibits localized characteristics different from the surrounding area. For example, the microsites created by a rock outcrop with thin soils, or the shaded and cooled areas created on a site by the presence of slash.

Natural regeneration:

The renewal of a tree crop by natural as opposed to human means, e.g. seed on-site from adjacent stands, or brought in by wind, birds, or animals.

Net volume:

Volume of the main stem excluding stump and top as well as the defective and decayed wood of trees or stands.

Non-forest land:

Land not primarily intended for growing or supporting a forest.

Non-timber resources

Resources other than timber, such as recreation, aesthetics, wildlife, fish, forage, range, water, and soils.

NSR (not satisfactorily restocked):

Productive forest land that has been denuded and has failed partially or completely to regenerate naturally or to be artificially regenerated.

Operational cruise:

An estimate, to a specified degree of accuracy, of the volume of timber on an area to be harvested.

Overstorey:

That portion of the trees in a forest of more than one storey forming the upper or uppermost canopy layer.

Overtopping:

Vegetation higher than the favored species, as in brush or deciduous species shading and suppressing more desirable coniferous trees.

Per hectare factor:

A number used to convert sample plot information to per hectare information (as in converting the plot volume to be a per hectare volume).

Periodic harvests (periodic cut):

The removal of several years' accumulated AAC in one year or other period.

Pest:

An organism capable of causing material damage. Forest pests include insects and diseases.

Pioneer plants:

A succession term for plants capable of invading bare sites, e.g. a newly-exposed soil surface and persisting there, i.e. 'colonizing' until supplanted by invader or other succession species.

Plug:

A seedling grown in a small container under carefully controlled (nursery) conditions. When seedlings are removed from containers for planting, the nursery soil remains bound up in their roots. See 'bareroot seedling'.

Pre-harvest silviculture assessment (or survey):

The survey carried out on a stand prior to logging to collect specific information on the silvicultural conditions such as planting survival, free-growing status, stocking, etc. See also 'silvicultural survey'.

Pre-harvest silviculture prescription:

A planning system that collects site-specific field data and develops forest management prescriptions for cutblocks in advance of logging.

Prescribed burning:

The knowledgeable application of fire to specified land area to accomplish designated land management objectives.

Provincial forest inventory:

A description of the quantity and quality of forest trees, non-wood values, and many of the characteristics of the land base compiled from statistical data for the forest land of the province.

Pruning:

The manual removal of the lower branches of crop trees to a predetermined height to produce clear, knot-free wood.

Railway grade:

The road-bed upon which ties and rails were laid.

Reforestation:

The natural or artificial restocking (i.e. planting, seeding) of an area with forest trees. Also called forest regeneration.

Regeneration delay:

The maximum time allowed for initial restocking of a denuded area (as a result of harvesting, fire, etc.) with the minimum number of acceptable trees. The time is measured in growing seasons from the beginning of denudation.

Regeneration performance assessment (RPA):

A sampling survey carried out to collect field data on the height, growth, competition, and stocking of young stands (five-10 years).

Registered professional forester:

A person registered under the *Foresters Act* who performs or directs works, services or undertakings requiring specialized knowledge, training and experience in forestry.

Right-of-way:

The strip of land over which a power line, railway line, road, etc., extends.

Riparian:

Situated or dwelling on the bank of a river or other body of water.

Rotation age:

The age at which a stand is considered mature and ready for harvesting.

Sanitation cutting:

The removal of damaged or diseased stems to prevent the spread of insects or disease.

Second growth:

A second forest that develops after harvest of the original mature old-growth forest.

Seedbed:

In natural regeneration, the soil or forest floor on which seed falls; in nursery practice, a prepared area over which seed is sown.

Seed orchard:

An area of specially planted trees that have been selected for their superior characteristics (i.e. growth, volume, branching, pest resistance, etc.) to breed genetically improved seed.

Selection cutting

An uneven-aged silviculture system in which trees are harvested individually or in small groups continuously at relatively short intervals.

Seral stage:

The series of changes occurring in the ecological succession of a plant community, e.g. pioneer stage or climax stage.

Shade-tolerant:

The capacity of a tree or plant species to develop and grow in the shade of, and in competition with, other trees or plants.

Shelterwood:

Any harvest cutting of a more or less regular and mature crop designed to establish a new crop under the protection of the old.

Silviculture:

The art and science of growing and tending a forest.

Silviculture survey:

A sampling procedure to determine silvicultural conditions such as planting survival, free-growing status, stocking, etc., leading to management decisions. See also 'pre-harvest silviculture assessment'.

Silviculture system:

A process following accepted silvicultural conditions whereby forests are tended, harvested, and replaced.

Site class:

The measure of the relative productive capacity of a site for a particular crop or stand based on volume or height at a given age. Forest sites are broadly classed as good, medium, poor, or low.

Site preparation:

Disturbance of an area's topsoil and ground vegetation to create conditions suitable for regeneration.

Site rehabilitation:

The conversion of the existing unsatisfactory cover on highly productive forest sites to a cover of commercially valuable species.

Skidder:

A wheeled or tracked vehicle used for sliding/dragging logs from the stump to a landing.

Skidding:

The process of sliding/dragging logs from the stump to a landing, usually applied to group-based operations.

Skid trail:

A rough-formed, temporary forest trail, suitable for use by horses or equipment such as bulldozers or skidders in bringing trees or logs from the actual place of felling to a landing.

Skyline:

A type of cable logging in which the mainline is stationary as a carriage moves along it carrying logs from the felling site to the landing.

Slash:

The residue left on the ground after felling, including unused logs, uprooted stumps, broken tops, etc.

Small-scale forestry:

In general, non-industrial forestry operations. In B.C., small-scale forestry operations are carried out by woodlot licensees, Indian bands, and private landowners.

Soil compaction:

The compression of soil as a result of heavy equipment traffic.

Spacing:

The act of removing trees from a stand to decrease the stand density, distribute the crop trees more evenly over the growing site, and create more growing room. See also 'intertree distance', 'juvenile spacing', and 'thinning'.

Special forest products:

As defined under the Forest Act to include: poles; posts; pilings; shakes; shingle bolts; Christmas trees; building logs; mining timbers; props and caps; cribbing; firewood and fuel logs; hop poles; orchard props; car stakes; round stakes, sticks and pickets; split stakes, pickets, palings; shake bolts, blocks and blanks; shingle blocks.

Spur road:

A branch of main or secondary road.

Stand:

A community of trees sufficiently uniform in species, age, arrangement or condition to be distinguishable as a group from the forest or other growth in the area.

Stand density:

A relative measure of the amount of stocking on a forest area. Often described in terms of stems per hectare.

Stand improvement:

Any silvicultural treatment that increases the growth, quality or value of trees in a stand.

Stand tending:

A variety of forest management activities carried out at different stages in the life of a stand. Treatments may include: juvenile spacing; brushing; commercial thinning; fertilization; conifer release; site rehabilitation; mistletoe control; seed-tree control; and pruning.

Statistical sampling:

The selection of sample units from a population and the measurement and/or recording of information on these units to obtain estimates of population characteristics.

Stocking class:

A numeric code representing a range of stems per hectare, sometimes estimated by crown closure on aerial photographs, e.g. stocking class 1 is mature with 76 + stems/ha of > 27.5 cm dbh; class 2 is mature with < 76 stems/ha; class 0 is immature.

Strata:

Groups of forest types with the same or similar species composition, age, and height class. (Plural of stratum.)

Stratum:

A subdivision of a forest area to be inventoried based on a group of trees with the same or similar species composition, age, and height class.

Stream gradient:

The general slope, or rate of vertical drop per unit of length, of a flowing stream.

Stumpage:

The price that must be paid to the provincial government for timber harvested from Crown land.

Stumpage appraisal:

The process by which the stumpage to be charged for harvesting on any given area is estimated.

Sub-grade:

That part of a road consisting of the material already in place (the road base).

Succession:

The replacement of one plant community by another in progressive development toward climax vegetation.

Suppressed:

Trees with crowns entirely below the general level of the crown cover receiving little or no direct light from above or from the sides.

Survival assessment:

A survey that estimates survival, which is the percentage of trees living after a period of growth (often two - five years) following planting.

Sustained yield:

A method of forest management that calls for an approximate balance between net growth and amount harvested.

Tenure:

The holding, particularly as to manner or term (i.e. period of time), of property. Land tenure may be broadly categorized into private lands, federal lands, and provincial Crown lands. The *Forest Act* defines a number of forestry tenures by which the cutting of timber and other user rights to Crown land are assigned.

Thinning:

The process of removing excess and poorer-quality trees from a stand for the purpose of improving the growth and value of the remaining crop trees.

Timber cruising:

The collection of field data on forests commonly by the measurement and recording of information in sample plots. Includes the measurement and estimation of volumes of standing trees.

Timber mark:

A hammer indentation made on cut timber for identification purposes.

Tree farm licence:

A form of tenure agreement which allows the long-term practise of sound forest management and harvesting on Crown land or on a combination of Crown and private land by private interests under the supervision of the Forest Service.

Turnout:

A space adjacent to road in which vehicles may park or pull into to allow others to pass.

Understorey:

That portion of the trees or other vegetation in a forest stand below the main canopy level.

Uneven-aged:

Stands with a wide range of ages and sizes.

Unmanaged forest land:

Forest land that is not subject to management under a forest management plan.

Utilization standards:

The utilization limits (stump height and top diameter inside bark) which define the trees considered commercially saleable by the Ministry of Forests, and therefore the dimensions of all trees that must be cut and removed from Crown land harvesting operations.

Variable -area-plot sampling method:

A method of timber cruising commonly used for industrial timber cruising in which sampling area (plot size) varies with tree diameter.

Water bar:

A shallow trench cut into the road surface or created by an embankment (e.g. log and soil) to collect and channel water off the surface to avoid erosion.

Wildling:

A seedling naturally reproduced outside of a nursery, used in forest planting.

Windthrown:

Uprooted by the wind.

Wolf tree:

A vigorous tree that has merchantable value but occupies more space than its value warrants. Usually broad crowned, dominant, and very limby. Often a remnant from a previous stand.

Woodlot licence:

An area of forest land containing not more than 400 ha of Crown land which may be managed in conjunction with some private land.

Yarding:

Moving trees or logs from felling site to roadside with cable, winch, or helicopter.

Nahmint Watershed Integrated Resource Study

British Columbia Forest Service
Vancouver District

August, 1975
Revised, 1980, 1989
(Revised to update addresses, certain minor references
and metrification only, January 1991)

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Abstract

An interdisciplinary planning program designed to allow assessment of resource values and their consideration in logging development plans was applied in the Nahmint River watershed on the west coast of Vancouver Island. Participating organizations included federal and provincial government resource agencies, the company holding timber harvesting rights in the area, and individuals from the University of British Columbia.

The program involved three phases — data collection (inventory), data analysis and interpretation, and planning. Information collected mainly during the period April 1974 - May 1975 was used as a basis for setting logging development restrictions and developing plans for other resource sectors, including recreation.

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Preface

The interdisciplinary nature of this study necessitated the formation of a study group composed of individuals representing many agencies. While the responsibility for direction and coordination of the study rested with the author, in conjunction with the project co-ordinators from MacMillan Bloedel Limited, major contributions were made by many other participants in the study. This help is gratefully acknowledged. A full list of participants is provided on the following page.

Special thanks are extended to T. T. Kimoto and J. W. Cowlard of MacMillan Bloedel Limited, who shared coordination duties with the author and contributed many ideas to the project's direction. The generous provision of helicopter and fixed-wing transportation by MacMillan Bloedel Limited to many of the study's participants is especially appreciated, as is the preparation and assembly of the maps used in the planning session, by Arvid Carlson of MacMillan Bloedel's Nanaimo office.

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1. Introduction

Integrated approaches to planning and management of resource development have become increasingly common in recent years. Pressures on resource managers to produce a wider range of benefits from resource development and to minimize damage to ecosystem components have necessitated the incorporation of expertise in many fields in the planning process. This approach, which is in most cases more complex than the single-resource-oriented planning which prevailed previously, has arisen through many studies of planning methods in North America and the rest of the world. In British Columbia particularly, integrated resource planning management studies have only become common in the last five years. Approaches used here have drawn heavily upon the results of similar projects undertaken previously in eastern Canada and the United States.

The Nahmint Integrated Resource Study is one of a series of studies conducted within the Vancouver Forest Region which have been designed to produce a model of an integrated planning system.

This study and others preceding it have contributed to the system now being applied on a widespread basis to areas of forest development throughout the Vancouver Region. Participants in the Nahmint study included provincial and federal government agencies, representatives of the University of British Columbia, and MacMillan Bloedel Limited, the company proposing development of the Nahmint watershed. A full list of participating organizations can be found in Table 1.

Table 1: Participating organizations in the Nahmint Integrated Resource Study

A. Government of Canada

1. Environment Canada — Fisheries and Marine Service

B. Province of British Columbia

1. Department of Agriculture — Soils Branch
2. Department of Lands, Forests and Water Resources
    a. Water Resources Service
    b. British Columbia Forest Service
3. Department of Mines and Petroleum Resources — Mineral Resources Branch
4. Department of Recreation and Conservation
    a. Fish and Wildlife Branch
    b. Parks Branch
5. Environment and Land Use Committee Secretariat
   Climate and Data Services Division

C. MacMillan Bloedel Ltd. — Taylor and Forestry Divisions

D. University of British Columbia — Faculty of Forestry

2. Study area

2.1 Location and area

The Nahmint watershed lies in the south-central portion of Vancouver Island, British Columbia and covers 19 529 hectares. The Nahmint River rises near Mount Klitsa and empties into Nahmint Bay on the Alberni Canal about 21 kilometres southwest of Port Alberni . Nahmint Lake, the only large lake in the system, has an area of 725 hectares and lies approximately 10 kilometres upstream from Nahmint Bay. See Map 1 for details.

This is an area of varied topography with elevations ranging from sea level to 1 643 metres. The watershed is relatively long and narrow, averaging approximately 36 kilometres by five kilometres, and is generally a U-shaped valley with few large tributary valleys.

2.2 Bedrock geology and landforms

The bedrock geology map of the area indicates that the major portion of the watershed is underlain by basalt and pillow lava of the Karmutsen Group (Upper Triassic), with minor amounts of granodiorite, quartz diorite, limestone and argillite also present (Geological Survey of Canada, Map Sheet 165-Fraser River). The presence of large amounts of morainal materials within the watershed, as shown on landform maps prepared by the Soils Branch of the B.C. Department of Agriculture, indicates the past influence of glacial activity.

Subsequent effects of weathering and gravity on steeper slopes are indicated by colluvial deposits in many areas, and much of the valley bottom is covered in fluvial materials deposited through the actions of the shifting drainage pattern since the retreat of the glaciers.

2.3 Climate

The climate of the area is of the west coast marine type, with annual precipitation as indicated by the E.L.U.C. Secretariat - Climate and Data Services Division, ranging from approximately 330 cm at Nahmint Bay to 457 cm at Nahmint Lake, and up to 508 cm in the upper regions of the watershed (E. Karanka, personal communication). About 80 per cent of this precipitation falls as rain during the months of October through April. More significant than precipitation totals though are the short-term intensities of rainfall which are estimated to range from a 25-year maximum rainfall of 22 cm in 24 hours at Nahmint Bay, to a 25-year 24-hour maximum of 47 cm in the watershed's upper regions. Temperatures throughout the year appear more moderate than those in nearby Alberni Valley, with the mean daily maximum at Nahmint Lake for July, the warmest month, being approximately 23 degrees Celsius (Alberni Valley July mean daily maximum is about 25 degrees Celsius). The mean daily minimum temperature at Nahmint Lake for January, the coldest month, being approximately 1 degree Celsius (Alberni Valley January mean daily minimum is about 3 degrees Celsius).

2.4 Hydrology

The concentration of rainfall during the late fall to early spring period results in high flows in the Nahmint River during the winter and low flows during the summer, as snowmelt water is not enough to ensure high runoff during the dry period (Cheng, 1974). Seven years of records for the Nahmint system (1924 - 1931) indicate the great variation in daily runoff figures which result in the area. As reported by Cheng (op. cit., p.4) "the maximum daily runoff for the period of record is 248 cubic metres per second on December 31, 1926, and the minimum daily runoff for the same period is .93 cubic metres per second on September 10, 1928," as measured immediately downstream of the outlet of Nahmint Lake.

2.5 Vegetation

Several vegetation zones and subzones as described by Krajina (1969) are represented in the Nahmint drainage, including the Coastal Western Hemlock Zone (both Wet and Dry Subzones) and the Mountain Hemlock Zone. The most abundant coniferous species are western hemlock (*Tsuga heterophylla*), western redcedar (*Thuja plicata*), amabilis fir (*Abies amabilis*) and Douglas-fir (*Pseudotsuga menziesii*) with Sitka spruce (*Picea sitchensis*) and mountain hemlock (*Tsuga mertensiana*) common but less abundant. Most common understorey plants include huckleberry (*Vaccinium*) species, salal (*Gaultheria shallon*), sword fern (*Polystichum munitum*), deer fern (*Blechnum spicant*) and vanilla leaf (*Achlys triphylla*).

2.6 Wildlife

The following discussion of the wildlife of Nahmint Valley has been compiled from comments of Fish and Wildlife Branch personnel and employees of MacMillan Bloedel Ltd.

The wildlife population of the area is apparently diverse but not particularly abundant. Both blacktail deer (*Odocoileus hemionus columbianus*) and Roosevelt elk (*Cervus elaphus roosevelti*) occur in the area although both species are relatively scarce, — particularly elk, which appear only to frequent parts of the upper watershed at irregular intervals. Unconfirmed reports of wolf (*Canis lupus*) and cougar (*Felis concolor*) have been received. Among the most common of the carnivore species are mink (*Mustela vison*) and black bear (*Ursus americanus*). Beaver (*Castor canadensis*) are also present along the lower Nahmint River.

Several noteworthy bird species are reported to occur in the area. These include bald eagles, Canada geese, swans (possibly trumpeters) and several species of ducks including mallards. The estuary at Nahmint Bay and Nahmint Lake appear to be the most important areas of the watershed to the migratory bird population.

2.7 Fish

The fish populations of Nahmint River and Lake are presently sustaining most of the recreational interest in the watershed. By far the greatest interest is focused on the run of large chinook salmon (*Oncorhyncus tshawytscha*) which reach weights of more than 23 kilograms and spawn in the lower Nahmint River. A private lodge located in Nahmint Bay caters mainly to the many fishermen who come to the area to fish for these 'tyees' during late August and early September. The magnitude of the fishing pressure exerted during the peak of the tyee run is indicated by federal Fisheries and Marine Service counts of approximately 3,000 boat-days in the Alberni Canal for the first week of September, 1973, with 86 per cent of the boaters fishing in Nahmint Bay (Dalziel 1975).

A significant run of 'summer' steelhead (*Salmo gairdneri*) also attracts fishermen to the river and lake. Other species found in the system are cutthroat trout (*Salmo clarki*), resident rainbow trout (*Salmo gairdneri*), coho salmon (*Oncorhyncus kisutch*), pink salmon (*Oncorhyncus gorbuscha*), chum salmon (*Oncorhyncus keta*), sockeye salmon (*Oncorhyncus nerka*), Dolly Varden char (*Salvelinus malma*) and prickly sculpin (*Cotus asper*) (Narver 1974, Hazeldine and Burns 1970). Chum salmon make up the largest portion of the watershed's salmon population, with up to 35,000 spawing in the lower river annually (Bond et. al., 1975).

3. Present use

3.1 Forestry

The Nahmint watershed falls entirely within Tree Farm Licence 44 which is held by MacMillan Bloedel Limited. The licence agreement awards the responsibility of management of the forest crop on asustained-yield basis to that company, and as such the timber of the Nahmint drainage contributes to the calculated annual allowabl e cut for T.F.L. 44. The watershed covers 4.3 per cent of the total area of T.F.L. 44 and contributes approximately four per cent to the allowable cut per year for the T.F.L.

The only previous logging in the Nahmint occurred during the mid-1930s when Alberni Pacific Lumber operated a railroad logging system along the lower river's northeast side (see Map 2). However, logging operations which have been progressing down the Alberni Canal from Port Alberni through the Cous Creek and Macktush Creek drainages are now approaching the Nahmint and the company has proposed development of the area, beginning this year (1975). Portions of the lower valley are apparently suitable as 'winter show' logging areas which are in relatively short supply throughout the Alberni region and which could help to employ the aproximately 250 workers in the Sproat Lake Woodlands Division during the period when most areas are inaccessible due to snow depths.

3.2 Recreation

Recreational use of the Nahmint area is surprisingly high considering the restricted nature of present (1975) access to the watershed. The nearest roads presently end approximately three km from Nahmint Bay and two km from the upper end of Nahmint Lake. The lower 3.5 km of the Nahmint River is usually accessible by small boat, but all access to the upper watershed is by air or on foot.

A trail has been flagged from the end of the logging road near Gracie Lake down to the northeast corner of Nahmint Lake.

An indication of the high quality of recreational experience available at present is provided by the existence of five cabins erected in trespass over the last 20 years, at various points in the watershed. The attractions of the area were apparently sufficient to justify the expense of considerable time, energy and money on the erection of the structures (all materials were apparently transported by air or water or obtained on-site) and also to make acceptable to the builders the risk of being required by the Forest Service to remove the cabins and restore the sites to their original conditions at any time.

The main attraction for the owners of the cabins and other recreationists who visit the area more casually appears to be fishing. Large steelhead are caught in Nahmint River both above and below the lake, and trout in the seven-kilogram (15-pound) range are regularly taken from Nahmint Lake itself. It is not known (1975) whether these large rainbows caught in Nahmint Lake are resident fish or steelhead holding there before moving up-river to spawn. Smaller rainbow trout are reported to be plentiful in the lake and parts of the river, also. The lake is sometimes used for boating, canoeing and swimming.

4. Study Initiation

Possible effects of logging on the well-known salmon and steelhead resources supported by the Nahmint River, as well as on the aesthetic values and recreation potential of the watershed, have aroused the concern of many members of the public, particularly in the Port Alberni area, during the last five years. Several individuals and organizations expressed their concern during 1972 - 1973 to the Forest Service, to the Minister of Lands, Forests and Water Resources and the Member of the Legislative Assembly for the Alberni area. The Nahmint Integrated Resource Study was initiated in late 1973 in response to this widespread concern, which had also been expressed by other government agencies (Hazeldine and Burns, op. cit.).

Since preliminary studies of a planning system to be applied throughout the Vancouver Forest District were at the time being completed on the Toquart River and Chapman Creek watersheds (Baker and Nyberg 1974a, 1974b), the Nahmint situation provided an excellent opportunity for the testing of the resource planning model proposed as a result of these previous studies.

As in the Toquart and Chapman studies, responsibility for organization and coordination of the Nahmint study lay with the B.C. Forest Service. The Forest Service's objectives in the Nahmint study, as laid out by the Chief Forester for British Columbia on October 18, 1973 were: firstly, "that of superimposing an acceptable pattern and level of logging on a compromised composite base of all other resource uses" and, secondly, to "provide a "test case" for the implementation of newly developed resource-use methodology." These objectives are related to the more general Forest Service policy statement which, in part, says that "The objective of the British Columbia Forest Service . . . is to develop and enforce policies which will ensure for all time the proper balance of timber supply, forage production, forest recreation, wildlife protection and environmental preservation on the Crown forest lands of the province" (anonymous, 1975).

At the time the Forest Service was preparing to request the assistance of other government resource agencies in the integrated study of the Nahmint drainage, MacMillan Bloedel Limited was proceeding with their own plans to hire consultants to study the resources of the area. Following joint meetings during the winter of 1973 - 1974, it was decided to proceed with only one study, to be coordinated and directed by representatives of the Forest Service and MacMillan Bloedel, and where possible, with government resource agencies providing input to the program on all facets of the resource base. Co-ordination by the Forest Service was provided from the Management Section of the Vancouver District office, while MacMillan Bloedel's coordinator was assigned to the company's Taylor Division engineering staff.

5. Project phases

5.1 Background

The Nahmint study followed closely the general format of the Toquart Watershed Integrated Resource Study (Baker and Nyberg 1974a). Reference should be made to the Toquart study report for details of the development of the planning system employed in both it and the current study, and for an explanation of the rationale behind the various aspects of the system. The following discussion of the Nahmint program will therefore focus only on *what* was done rather than *why* it was done.

However, there were some modifications and additions to the Toquart system during the current project. For example, the use of a package computer program for storage and retrieval of resource information was not employed in the Nahmint study as it had been in the Toquart study. The major addition to the Toquart program employed during the current study was the collection of data on resources other than timber by timber cruisers employed by MacMillan Bloedel. Program changes will be discussed in more detail below.

In broad outline, the Nahmint project consisted of three phases — inventory, data analysis and interpretation and planning. While this breakdown of the project into phases provides a convenient framework for more detailed discussion, it should be realized that there was considerable overlap in the timing of the phases. For example, while the major part of the inventory phase was completed during 1974, information on climate and hydrology will continue to be collected until the end of 1975, long after the initial planning phase has been completed. This continued collection of information will allow the Climate and Data Services Division and the Water Resources Service to strengthen their data base for west coast watersheds, and should also provide information useful in future planning for the Nahmint. It is also obvious that the planning process for the area must be ongoing, with new information being collected, plans being updated, and more site-specific decisions being made whenever possible.

5.2 Inventories

5.2.1 Standard programs

Individual field inventories of the various resources of the area were conducted by most of the agencies participating in the study. Details of the inventory methods and the results of these investigations have in most cases been compiled into individual sector reports, and a folio of the pertinent maps has been prepared. A list of all reports on the area now available and those being prepared for publication in the near future is provided in Table 2. In order to keep this report from reaching an unmanageable size it was decided not to include a full set of the sector reports. Anyone wishing any or all of the sector reports should contact the agency responsible for each report at the address listed in Table 2.

The map folio for the area was compiled with the cooperation of MacMillan Bloedel. The individual map titles are listed in Table 3, as are the locations where full sets of the folio are available for viewing. Paper copies of any of the maps are available from the Port Alberni Forest District office.

As in previous studies, it was found to be difficult to arrange individual inventories into an overall program which would provide basic data on any one resource at a time when it could be used by others in making inventory plans or interpretations on other resources. Generally, staffing levels and other commitments of those involved in this project prohibited the following of the recommended inventory sequence of the Toquart study report (Baker and Nyberg 1974a, p.19) which would begin with installation of hydrologic and climatic instruments and be followed by landform-topography, ecological, forestry, fish and wildlife, and recreation inventories in that order.

Two inventory programs used in this study will not be reported on in detail by others and therefore will be discussed here. These were the low-level color photography of the Nahmint River system and six cross-valley transects provided by the Forest Service Inventory Division, and the 'integrated inventory' carried out by MacMillan Bloedel timber cruisers.

5.2.2 Low-level photography

The low-level color photography was obtained using the Forest Service's twin camera boom-mounted system on a Bell helicopter (Edwards and Waelti 1972). As a result of experience with this type of photography in previous studies (Karanka 1974), it was decided that the most suitable scale would be 1:2500 with a 20 per cent overlap of the stereo-pairs. The film was exposed on 17 - 18 May 1974.

The areas photographed 16 kilometres (10 miles) above Nahmint Lake, two tributaries in the upper watershed, the entire shoreline of Nahmint Lake, and six transects across the valley to the height-of-land on each side, in locations were selected in order to sample as many vegetation and topographic types as possible.

The purposes of obtaining the low-level photography were threefold. First, it provides a permanent record of the 'pristine' state of the Nahmint drainage system, to which any alterations occurring in future can be compared. Second, many stream characteristics such as bank and substrate composition and pool-to-riffle ratios can be measured for use in fish habitat analysis and in making more detailed management prescriptions than can be drawn from smaller-scale maps and photographs. Finally, it was hoped that the vegetation visible on

Table 2: Resource sector reports

		Obtainable from:
1.	*Landform classification and some general interpretations for the Nahmint watershed* - J. Jungen	Soils Branch B.C. Dept. of Agriculture Court House Kelowna, B.C.
2.	*Landscape unit analysis of the Nahmint watershed* - D. Briere	Manager Port Alberni Forest District 4227 - Sixth Ave. Port Alberni, B.C. V9Y 4N1
3.	*Climate of the Nahmint Basin* - E. J. Karanka	E.L.U.C. Secretariat Climate and Data Services Division Parliament Buildings Victoria, B.C.
4.	*Nahmint River watershed hydrology study* - preliminary report J. Cheng and	
5.	*Hydrology of the Nahmint River watershed* - J. Cheng	Hydrology Division Water Investigations Branch Parliament Buildings Victoria, B.C.
6.	*Biophysical stream survey of the upper Nahmint River and Nahmint Lake* - K. W. Bond, M. J. Brownlee, T. W. Chanmberlin and J. M. Lamb	Environment Canada Fisheries and Marine Service 1090 W. Pender St. Vancouver, B.C.
7.	*Nahmint River estuary* - K Kennedy and B. R. Waters	Ministry of Environment Fish and Wildlife Branch 2569 Kenworth Rd. Nanaimo, B.C. V9T 4P7
8.	*A preliminary report on the benthic invertebrates of the Nahmint River estuary* - P. G. Lim	Environmental Studies Division Water Investigations Branch Parliament Buildings Victoria, B.C.
9.	*Recreational use and opportunity in the Nahmint watershed* - B. R. Dalziel	Parks Branch Coastal Planning Division Parliament Buildings Victoria, B.C.
10.	*Nahmint watershed recreation survey* - E.M. Cameron and I. H. Fuchs	Manager Port Alberni Forest District 4227 - Sixth Ave. Port Alberni, B.C. V9Y 4N1
11.	*A survey of deer range within the Nahmint River watershed*, R. Davies, D. Hebert and G. W. Smith	Ministry of Environment Fish and Wildlife Branch 2569 Kenworth Rd. Nanaimo, B.C. V9T 4P7
12.	*Development Study - Nahmint River watershed* - J. W. Cowlard, A. C. Demerse, M. L. Daniels and	
13.	*Nahmint Lake debris boom analysis* - J. W. Cowlard	MacMillan Bloedel Limited Sproat Lake Woodlands Division Port Alberni, B.C.
14.	*Nahmint watershed visual impact study* - S. R. Horner	Manager Port Alberni Forest District 4227 - Sixth Ave. Port Alberni, B.C. V9Y 4N1

Table 3: Resource sector maps and viewing locations

Map Title	Prepared By
Planimetric Base	MacMillan Bloedel Ltd.
Topography	MacMillan Bloedel Ltd.
Forest Cover	MacMillan Bloedel Ltd.
Landforms	Soils Branch, B.C.D.A.
Landscape Units	B.C. Forest Service
Aquatic System	Fisheries & Marine Service
Recreational Capability	B.C. Forest Service
Deer Winter Range Potential	Fish and Wildlife Branch
Proposed Road Network	MacMillan Bloedel Ltd.

Folios of the above maps are available for viewing at:
Port Alberni Forest District
4227 - Sixth Ave.
Port Alberni, B.C.
V9Y 4N1
Telephone: 724-9205

the stream and lake margins and on the areas shown on the cross-valley transects could be analysed to supplement field work, which requires vegetation mapping such as that done for ecosystem, landscape-unit and wildlife-habitat analysis.

Due to the considerable time necessary for detailed analysis of the low-level photography and the other commitments of those involved in the Nahmint study, the stream channel and vegetation analyses have not yet been carried out. For this reason, the photographs have so far not had direct value to the current study. The information derived from future analysis of these photos (hopefully to be done this fall) should prove useful in follow-up planning and site-specific management in the Nahmint watershed, however, and should also indicate the potential value of this inventory method in future studies.

3.2.3 Integrated inventory

As discussed earlier, the major new concept employed in this project was the collection of data on several different resources by MacMillan Bloedel timber cruisers working in the Nahmint watershed. The word 'new' is not strictly accurate in this instance, as similar programs have been carried out in the province in a few previous cases (E. G. Vaughan and D. Hebert, pers. comm.). This does appear to be the most detailed and large-scale application of the concept in B.C. to date.

The basic premise behind the 'integrated inventory' was that timber cruisers could be trained to collect basic data on the biophysical characteristics of the areas being sampled which would not add a substantial time burden to their regular timber inventory program. This procedure was assumed to have the potential to be more efficient than the collection of the data by a second crew (or by several different crews) which would require extra equipment and transportation costs. It must be stressed that the information on resources other than timber was not intended to replace the regular inventories normally conducted by other agencies, but to act as a supplement which would help to direct more intensive inventories in particular areas or for checking of interpretations made from aerial photography, such as vegetation composition.

The timber inventory carried out in the Nahmint during 1974 was part of an overall re-cruise of Tree Farm Licence 21 which had been started in 1973. This was being done in order to update the inventory information obtained in a previous cruise approximately 10 years earlier.

In laying out the areas to be cruised, aerial photographs of the watershed were first pre-stratified according to timber types. Two types of plots were then randomly located on the photos. 'Sample plots' were layed out at approximately one per 40.5 hectares of timber in each mature stand. On these plots all timber, both living and dead, was measured and pathological and decay factors noted. This information was used to correct the volume calculations derived from 'code plots' which were put in between sample plots, and which numbered about one per eight hectares of mature timber. On code plots, only live trees were measured and disease and decay factors were not noted. In older immature timber, more detailed code plots, but no sample plots, were located.

In the field, two-man crews located each plot and performed their standard timber inventory measurements. Extra information on resources other than timber was also collected, at three different stages of the inventory process. This data is listed under subject headings on the 'Land Use Tally Card' which was carried in the field by the cruisers.

Information collected at sample plots is listed on the tally card under the headings 'Plot Transect' (wildlife distribution and habitat information), 'Soil and Site' and 'Recreation'. While the cruisers were walking between code plots, they recorded the data listed under the 'Walking Transect' heading on the card, and whenever a stream was crossed, the 'Creek Crossing' section was filled out. Any particularly noteworthy features or more detailed descriptions were listed in the 'notes' section.

This additional data to be collected by the cruisers had been worked out through a series of meetings between representatives of government agencies, including, in part, the Fisheries and Marine Service, the Fish and Wildlife Branch and the Soils Branch, and MacMillan Bloedel Ltd. Suggested types of data to be collected were narrowed down to those which would require the least training of the cruisers and could be collected quickly and accurately. Where necessary, field lists for aid in making the measurements and descriptions were prepared for each crew (e.g. understorey vegetation descriptions). A two-day training session was held April 29 and 30, 1974 and a "test run" of the inventory was carried out in an area of approximately 10 square miles of the lower watershed May 21 - June 4, 1974. The methods were then revised slightly and applied throughout the watershed in a program lasting through October, 1974.

Following the completion of the cruising program all the information collected was coded and punched onto computer cards. Copies of these cards were then provided to those making resource interpretations for analysis. Discussion of the use of the data in wildlife and landscape unit analysis are provided in the reports by Davies, Hebert and Smith and by Briere (see Table 2).

A major deficiency in the fish - water section of the 'integrated inventory' program was that it was impossible to tie the creek crossing information to an individual stream and a particular point on the stream without a great deal of cross- referencing between data cards and the map of cruise plot locations. This, plus the fact that all stream samples were point samples in both space and time, lessened the utility of the information in analysis of fish habitat and in prescription of management activities. The former problem could in future be over come by having each creek crossing location noted on a map as the information is being recorded in the field, but the question of extrapolation of the information to other times and other points on a stream is not so easily resolved. This matter will require careful consideration before similar programs are undertaken in future.

Even taking into account the above-mentioned problems encountered in the 'integrated inventory' program, it appears to be a very promising approach which merits more widespread application. The volume of data collected was very large and, based on analysis of vegetation, seems to be of good reliability (D. Briere, pers. comm.). The time required for collection of the extra data, the critical factor in determining the program's potential for future application, decreased markedly as experience with the methods and parameters to be measured increased. In fact, while the collection of the extra information added approximately one hour per man-day to the cruising time in the first trial run of the program, it had fallen to only 10 minutes extra per man-day in the latter stages of the project (J. D'Alessio, pers. comm.). This was due mainly to increased familiarity with such factors as understorey vegetation species and codes and the method of calculating flow rates of the creeks.

Taking into account that the cruisers working on this project were among the most experienced employed by MacMillan Bloedel, slightly greater time expenditures could be expected on other projects involving less capable personnel. However, a side benefit of this program was that the cruisers were very enthusiastic about collecting the extra data because it added variety to their jobs and made them more aware of other features of their working environment (J. Mudge, pers. comm.). This fact would help to balance the extra costs involved in future programs of this type.

5.2.4 Public opinion

To complete the review of the inventory phase of the Nahmint project, the gathering of information on public opinion must be discussed. An attempt was made throughout the Nahmint study to inform interested members of the public of the study's organization, purposes and progress, and to solicit their opinions on the best use of the watershed's resources. This was not a full-scale public involvement program such as some of those carried out recently by the U.S. Forest Service, such a program would have involved a research effort beyond the terms of reference of the Nahmint study. Instead, the intent was to contact, through a preliminary information letter and regular progress reports, groups and individuals who were expected or known to have a specific, direct interest in the Nahmint drainage and one or more of its resources. It was assumed that the Nahmint program could thus be strengthened through the incorporation of recommendations received from those who were not members of the study group, and also that those participating in the study who would eventually be making decisions on resource uses in the area would obtain a better idea of the overall mix of benefits from its resources desired by the public.

Formal submissions were received from two organizations, the Alberni Valley Paddlers and Island Mountain Ramblers. The general theme of these letters was against intensive development, in that each stated that they wished to see the Nahmint watershed left in an essentially wilderness state with only limited recreational development.

In addition, many letters from individuals were received by the Forest Service, MacMillan Bloedel and the *Outdoor Journal*, a Vancouver Island weekly newspaper. In general these letters also expressed a desire for the retention of the wilderness character of the Nahmint drainage. Some were strongly anti-logging while others reflected only a concern for adequate development of recreational facilities as road access to the area became available.

A further indication of the great amount of public interest in the future use of the Nahmint watershed was the comparatively large amount of press coverage of the Nahmint study. In addition to the aforementioned letters to the editor published in the *Outdoor Journal*, reviews of the study's organization and progress appeared in that paper, the *Alberni Valley Times*, the two Victoria dailies (the *Colonist* and *Times*), the Vancouver dailies (the *Sun* and *Province*), in other, smaller newspapers and on CBC radio.

5.2.5 Group meetings

During the organizational and inventory stages of this project, regular study group meetings were held to familiarize participants with others in the group and their work, to discuss proposals for additions to the study program, and to review the information collected as the project progressed.

5.3 Data analysis and interpretation

Data collected in agency field inventories, from airphotos and from the 'integrated inventory' cruising program were analysed and interpreted to allow breakdown of the watershed into classifications of various kinds and to allow prescription of management constraints and recommendations. Some examples of the classifications of the watershed provided by various study participants were recreation capability, deer winter range potential, landscape unit analysis and landform distribution. These and other features of the watershed formed the basis for further interpretations, including development recommendations which were designed to provide for the protection or enhancement of various resources. The various interpretations are presented on the maps (listed in Table 3) and in the sector reports (listed in Table 2).

It should be noted that recommendations contained in the individual reports are the opinions of the authors only and do not represent a consensus of opinion of the study group. These recommendations, which were usually formulated on the basis of a single resource value, may not agree in all cases with the recommendations resulting from the planning meeting explained in the next section, at which all participating organizations and individuals drew up a list of 'integrated' recommendations and development constraints reflecting an overall consensus of opinion .

5.4 Planning

As in the Toquart study, the planning of development of the watershed, — that is, the formulating of development recommendations and constraints — was conducted during a two-day planning meeting at which all organizations participating in the Nahmint study were represented. This method was applied under the assumption that it would eliminate or at least mediate problems of bias towards a particular resource and thus allow a more balanced review of potential development activities or uses of the watershed. Prior to this final planning meeting, all available reports, maps, letters from the public and copies of newspaper articles had been circulated to project participants so that they would be aware of all aspects of the situation to be dealt with.

6.0 Management strategy

This is the text as revised, principally in 1980, and to a lesser extent in 1989. For the original 1975 text, see pages 19 to 25.

The management goals, recommendations and prescriptions as outlined below have been formulated through discussions with all agencies and the forest industry participating in the resource study. They constitute the approved management strategy for the Nahmint River watershed as revised on November 29, 1989.

6.1 Management goals

Forestry

a) Operations

- To plan and direct an economically viable logging operation in which the forest land base is protected, good utilization is practised and negative impacts on other resources are minimized.

b) Protection

- To protect the forest environment from loss or damage resulting from fire, insects and disease by:
  - regulating industrial activities and taking the necessary preventative measures as committed to in the licensee's fuel management plan;
  - developing road access, timbered firebreak patterns , a rapid detection and suppression capability and an awareness in watershed users of their responsibilities toward fire and environmental protection; and
  - ensuring early detection of abnormal insect and disease activity and by giving priority to the harvesting of damaged stands.

c) Silviculture

- To maintain and/or enhance the productive capacity of forest land by restocking with suitable tree species following logging.
- To carry out basic silviculture operations as prescribed to be required for the purpose of establishing a free growing crop of trees.
- To practise incremental silviculture where required as outlined in the Management and Working Plan for TFL 44.

d) Recreation

- To ensure that recreation potential and aesthetic values are recognized, identified and considered in the planning process.
- To facilitate the use of forest land and water for recreational purposes through development and maintenance of recreational facilities.
- This section will be updated upon completion of MacMillan Bloedel's review of the recreation potential and receipt of their recreational plan for the Nahmint watershed by June 1991.

e) Fisheries

- To minimize the impact of industrial development on the aquatic environment.
- To rehabilitate depleted stocks and enhance aquatic habitat for the salmonid fishery if viable opportunities exist.
- To manage salmon escapements to provide for optimum commercial and recreational opportunity.

f) Wildlife

- To minimize the impact of industrial development on wildlife distribution and numbers in the Nahmint watershed through:
  - protection of identified critical winter range habitats; and
  - management of the habitat surrounding the critical winter range habitats to maintain long-term forage production compatible with long-term wildlife-sustaining capabilities of the winter ranges.

g) Landscape

- To include landscape design in forest management planning, reflecting anticipated recreation use; this must be consistent with sound forest management principles and economics.

6.2 General recommendations

In addition to the general recommendations listed in this section, the following conditions are found in every cutting permit document:

- A stream protection clause.
- A provision for high lead logging unless a special plan is submitted for an alternate method which minimizes environmental effects.
- Forest Service minimum road specifications. A clause requiring construction of water bars and opening of culverts on cessation of logging.

The general recommendations are based on concerns regarding development of the Nahmint watershed that were expressed by the study participants during the planning meeting and are supplementary to the above contractual agreements.

A. Forestry

- Avoid logging areas of colluvial and morainal veneers on slopes greater than 70 per cent, unless a special plan is submitted to the Forest Service to ensure a minimal loss of productive area. For all logging planned on areas containing these materials, consideration should be given to using a long-line yarding system which exceeds the general reach capabilities of conventional high-lead systems.
- Deferred blocks should be windfirm and form viable units for future logging. Timber harvesting in these blocks will only be allowed when adjacent logged areas have re grown sufficiently to satisfy reasonable aesthetic, reforestation, wildlife, recreation and slope-stability requirements.

- Where leave-strips are prescribed along the river and lake in Section 6.3, a careful assessment must be made of blowdown intensity and effects of blowdown on fish habitat, aesthetics and timber supply. If severe blowdown problems are encountered in the early stages of operations, leave-strip provisions may be revised to better protect the river or to lessen timber losses.

B. Engineering

- The Forest Service Minimum Road Specifications shall be adhered to on all main roads. Lower engineering design standards may be accepted on secondary and spur roads, following consultation and approval by Vancouver Forest Regional engineering staff.
  In addition:
- All road development proximal to streams, where either rock work or unstable material may potentially enter the stream will be subject to multi-disciplinary on-site inspection, coordinated through the Forest Officer.
- When a road must be built on middle or upper landscape positions with slope greater than 60 per cent, the following steps will be taken:
  - avoid locating roads through areas of significant soil creep and where volumes of unconsolidated material must be excavated. Where essential, endhauling will be performed if included instability is expected through side casting. All endhaul dumping sites require prior evaluation;
  - avoid sidecasting material that will produce slopes greater than 70 per cent;
  - full bench all roads;
  - road locations should be avoided through or immediately adjacent to unstable soil or active slide areas. If these locations are essential or the above steps are impractical or if induced failures are expected to be significant, site specific investigations will be performed by L.U.P.A.T. Pedologists to evaluate the construction techniques proposed and the estimated damage and set any site-specific constraints; and
  - finally, if through the above practices, fisheries values could be affected as a result of erosion of sidecast or endhauled material, a joint inspection with fisheries agencies through the Forest Officer will be called.
- Road location should be avoided on fluvial escarpments or adjacent to those slopes where sidecast material will be added to the escarpment.
- Where feasible, the main haul road should follow the rail grade built during the 1930s along the north side of the lower river. This provides an ideal location for a major transportation route due to the minimal disturbance necessary to upgrade this surface to haul-road quality.

C. Fisheries

- Fisheries values will be identified by the stream-reach classification system described in the Coastal Fisheries Forest Guidelines (CFFG). The stream objective and protection measures of the CFFG will be applied in consultation with the Department of Fisheries and Oceans, the Ministry of Environment and the Forest Service.
- Bridges, wooden culverts or pipe-arches will be installed at all road crossings on streams presently utilized by fish to preserve the accessibility of these streams.
- When logging adjacent to streams (defined as all water courses, continuous or intermittent, including wet gullies that exhibit a defined channel), the falling boundaries and falling direction related to the stream will be determined by a joint inspection coordinated through the Forest Officer.
- Uphill yarding shall be maximized to prevent wood breakage and concentration of downslope run-off adjacent to water courses, consistent with machine capabilities and environmental considerations.
- Old windfalls and leaners that form part of a well-established stream environment shall not be felled or bucked.
- Timber on islands and within areas of braided channels or flood plains shall be retained and protected. Appropriate courses of action will be developed by a multi-disciplinary on-site inspection coordinated through the Forest Officer.
- Disturbance of deciduous and understorey vegetation will be minimized along the Nahmint mainstream or other fish-bearing water. All deciduous trees within 20 metres of such fish bearing water will be retained. Alder need not be retained, however, where selectively-logged buffer strips have not been required.
- Directional falling techniques may be required adjacent to secondary flood channels, alluvial fans, swamps adjacent to defined stream channels, alluvial fans, swamps adjacent to defined stream channels, active erosion sites, upstream holding pools, and where spawning and rearing habitat is present.
- *A Decision Making Procedure for Streamside Management on Vancouver Island* by M.K. Moore shall be applied on all areas where harvesting adjacent to fish-bearing streams is planned. Results and decisions to be discussed with Fisheries Agency and Forest Service personnel at the time of the annual Five Year Plan review meeting, if not earlier.

D. Recreation

- All identified areas having a high potential for either recreational use or recreational development will be reserved from logging until

This is the text as revised, principally in 1980, and to a lesser extent in 1989. For the original 1975 text, see pages 19 to 25.

alternative areas have been identified and are available for development.
- Recreation developments are expected in several locations as noted in Section 6.3. These sites shall be constructed commensurate with demand, as road access is developed.

In addition:
- the responsibility for identification, preservation, construction and maintenance of important recreation sites shall be developed by cooperation between the Forest Service and the tree farm licencee; and
- all recreation development and maintenance shall be in accordance with the policies and procedures as outlined in the current Forest Service Recreation Manual.

E. Landscape — Visual impact

- The overall planning of roads, logging openings and logging practices shall take into consideration recreation use particulary landscapes as seen from different viewpoints on the lake. Setting boundaries and shapes should be planned and laid out in conjunction with the *Forest Landscape Handbook*.
- Consultation of *A Visual Impact Analysis-Nahmint Valley* by C. D. Schultz and Company Limited and S. R. Horner's *Nahmint Watershed Visual Impact Study* is recommended to assist field staff with the understanding of landscape concepts. These reports describe the basic principles in determining visual quality and indicate the effects of visual impacts. Although several recommendations from the reports are not operationally practical, they indicate the general areas of concern for acceptable landscapes.

F. Wildlife

- Forest harvesting shall be deferred in critical wildlife habitat areas, including the estuary in Area 1, Areas 12, 13 and adjacent firebreaks below 860 metres with southern aspects.
- A diversity of habitat for forage production, visual cover and escape cover shall be available in areas adjacent to critical habitat areas.
- Pockets of snags will be retained as habitat for cavity nesters and other species which utilize snags for nesting, perching and roosting, consistent with government safety regulations.
- In the event that deer browsing results in intolerable levels of damage to plantations, appropriate population control measures will be considered by the Fish and Wildlife Branch.
- Any proposed alterations to the wildlife habitats shall be discussed with the resource agencies concerned.
- Forest management activities such as juvenile spacing and commercial thinning are expected to affect forage production; therefore, their timing and location should be discussed with the Fish and Wildlife Branch.
- Progressive (sequential) clearcutting shall not occur adjacent to the deferred critical deer range areas.
- The deferred areas shall be re-evaluated by the Ministry of Environment at least every 10 years to determine the necessity for longer-term retention.

G. Special concerns

- While some action has recently been taken (1975) in regard to cabins erected in trespass in the Nahmint drainage, it is apparent that improved road access to the remaining cabin sites will result in problems similar to those experienced with uncontrolled cabins throughout the province. These problems include vandalism, littering, increased fire hazard and conflicts between the builders of the cabins and other members of the public.
- For these reasons, it is recommended that all cabins existing in the Nahmint watershed be removed as roads approach the sites, either by the builders or, if necessary, the Forest Service, unless a particular cabin can be incorporated into the planned development of recreational facilities. Further explanation of cabin removal is included in Section 6.3.

6.3 Area-specific prescriptions

The following prescriptions apply to the areas designated on Maps 3 and 4 (in the map pocket). In most cases the numbered units are derived from landform units or positions thereof. The landform map should be referred to for exact boundaries of the larger units.

Area #1 (Nahmint Bay)

Resource values
- Fisheries values are very high.
- Wildlife capability is high in terms of spring forage for blacktail deer and habitat for other wildlife. The estuarine environment provides overwintering, feeding and/or breeding wildfowl habitat and seasonal cougar and blackbear habitat.
- Recreation values are high due to fishing and west coast estuary forest landscapes.
- Timber values are presently low, but the potential is high in the immature stands on good forest-growing sites .

Recommended management prescriptions
- Retain approximately 40 metres of timbered shoreline around Nahmint estuary.
- Discourage further intensive commercial development for log storage, marinas or logging camps within the Nahmint Bay areas as defined by the Fisheries and Marine Service sport fishing boundaries.

- Pay special attention to the landscape during future logging development, as there is considerable viewing time for boaters passing through Alberni Inlet (i.e., retention of dominant landscape characteristics during logging).

Area #2

Resource values

- Fisheries values are extremely high; this is the most important salmon-producing section of the Nahmint River.
- Recreation values are high, related to fishing.
- Timber values are low.

Recommended management prescriptions

- No development, other than a proposed recreation site, will be allowed in the immediate stream area.
- As access into the Nahmint watershed improves and the demand for recreational sites increases, a campsite may be developed at the location show. Access to the campsite is to be by trail from a parking area to be constructed along the main road.

Area #3

Resource values

- Fish production is high within the river and its tributaries throughout this area.
- Timber values are moderate to high.
- Recreation values are high, related to the landscape as viewed from Nahmint Bay and several potential campsites along the river.

Recommended management prescriptions

- Road construction by grade shovel or backhoe is required, unless alternative equipment is applicable. Any portion of Area #3 where grade shovel or backhoe is not planned, requires a proposal to be reviewed by the appropriate government agency for approval.
- Construction of cedar wood culverts, pipe arches or bridges at all road crossings of fish-bearing waters is required to facilitate fish passage.
- Extreme care must be taken to minimize sedimentation and avoid alteration of natural drainage patterns.
- No falling or yarding across channels or tributaries.
- Channels and tributaries should form a cutting boundary where possible.
- In addition, recommendations contained in the report by R.B. Townshend of L.U.P.A.T. must be strictly adhered to.

Area #4 (lower canyon)

Resource values

- Timber values are poor, based on timber quality and inaccessibility problems.
- Fisheries values are high due to high concentration of steelhead in the canyon pools.
- Recreational values are high due to heavy fishing pressure and aesthetic values of the canyon.

Recommended management prescriptions

- No logging will be allowed between the break in slope where the canyon walls begin and the river. This will prevent blockage of the river channel with logging debris and will maintain the aesthetic appeal of the canyon.

Area #6

Resource values

- Fisheries values are very high.
- Timber values are moderate to high.
- Recreation values are high and relate to the fishing and camping opportunities.

Recommended management prescriptions

- A windfirm leave-strip of mature and immature vegetation is required above the high-water wetted perimeter of the Nahmint River to protect fisheries habitat and aesthetic values of the area. Refer to General Recommendations under Forestry regarding blowdown of leave-strips.
- The location of leave-strips is to be determined during multi-disciplinary on-site inspections coordinated through the Forest Officer.
- No development other than bridge location #4 as discussed in MacMillan Bloedel's report *'Development Study - Nahmint River Watershed'* is to occur within the leave-strip.
- A multi-disciplinary, on-site inspection is required for all instream development activities.
- To ensure that future development options are protected, no harvesting is to occur on identified recreational sites within this area.

Area #7

Resource values

- Timber values are moderate.
- This area is considered the most suitable for a Primary Fire Break.

Area #8 (Nahmint Lake)

Resource values

- Recreation values are high due to sport fishing potential and aesthetic values of the lake area.

Recommended management prescriptions

- Construct a log boom across Nahmint Lake at its outlet or across Nahmint River near the lake to prevent natural and logging debris from entering the lower river, where severe jams may form. The magnitude of the debris problem will be examined over the next few years to determine the need for such a boom. Should a log boom be required, a cost-allowance arrangement for construction and maintenance will be considered by the Forest Service.
- Restriction of motor size for power boats is recommended for Nahmint Lake to preserve the appeal of the lake for those wishing to pursue activities such as fishing and canoeing. The Forest Service has recently submitted a power restriction application to the Ministry of Lands, Parks and Housing for approval.

Area #9

Resource values

- The only economically feasible route for the main Nahmint Road is close to the lake. For that reason the important scenic values of this area will be recognized by recreationists from viewpoints on land close to the shore as well as from anywhere on the lake.

Recommended management prescription

- Cutblocks should blend as much as possible with dominant lines and forms of the characteristic landscape, particularly as seen from various viewpoints on the lake and planned recreation sites.
- Planning for logging of deferred areas should follow the same principles as above, and take into consideration green-up requirements where needed for protection, silvicultural or environmental reasons.
- Harvesting activities between the main road and the lake must be planned to protect the lake shore environment from the direct and indirect effects of logging along the fairly steep slope. In order to reduce windthrow along much of the lakeshore, some careful logging to the shoreline may be advisable on a rotating basis. This creates vistas and contrasts in the landscape and future immature forests. Other sections visually sensitive to any disturbance should not be logged and particularly where heavy road cuts occur, tall trees left standing below the road may reduce the visual impact from the lake.
- Extensive blowdown exists near the southeast corner of the lake and should be the first timber logged so as to minimize possible dangers to recreationists.
- Mature timber shall be retained around proposed campsite and boat launch facilities located along the shoreline to ensure that future development options will be available. The campsites will be constructed according to demand, with the campsite and boat launching facility at Site A (see map) being the first priority.
- During road construction and road maintenance activities, sidecast material shall be utilized, or endhauled as necessary to protect water quality and/or critical areas of high visibility. This material may possibly be used for construction of parking areas and access roads to campsites within this constrained area.
- Considering the overall sensitivity of this area, it is essential that a special effort be made by the Licensee and the Forest Service to work together in the field to resolve problems of a site-specific nature. Consultation with Federal Fisheries and Fish and Wildlife officers must take place when proposed developments affect resources under their jurisdiction.

Area #10

Resource values

- Recreation values are extremely high due to the combination of a sandy beach, an attractive creek mouth, large mature timber with little undergrowth, and dry, spacious terraces which make it an ideal campsite location. Also, the upper reaches of the creek have numerous falls and cascades which add attraction to this area.

Recommended management prescription

- No harvesting activities shall occur within this constrained area.
- Minimize road access.
- Restrict location and opening size of cutblocks surrounding this area. These restrictions are to be determined during on-site inspections between the Licensee and the Forest Service.
- Develop a trail to the lakeshore and adjacent campsites with boat launching restricted to canoes, rubber rafts and cartop boats at this location.
- Develop a trail from the campsite uphill beside the creek to a large waterfall at an elevation of approximately 300 metres.
- Construct a parking space for cars and develop sites for campers and trailers on a terrace immediately below the main road location, approximately 200 metres from the beach.

This is the text as revised, principally in 1980, and to a lesser extent in 1989. For the original 1975 text, see pages 19 to 25.

Area #11

Resource values

- Timber values are considered high. This is the only area on the southwest shore of Nahmint Lake that is feasible to log using current technology.
- Recreation values are high due to the excellent beach (best on the lake).

Recommended management prescription

- To preserve the recreation values of this area, no harvesting shall occur.
- The cabin located at this site may be removed once boat-launching facilities are provided on the lake; the decision will be based on the recommendations of the Licensee and the Forest Service.

Areas #12 and #13 (Canyon Creek)

Resource values

- Wildlife values are high. The mature forest canopy in these areas provides both shelter and forage during the winter months for blacktail deer in times of heavy snowfall. This constitutes winter range. Areas 12 and 13 also provide year-round forest cover and habitat diversity for deer, black bear, furbearers, cavity nesters, etc.
- Timber values are moderate.

Recommended management prescriptions

- Defer timber harveting in Areas 12 and 13 until alternate winter range is available.
- Maintain identified deer winter range within Area 13 through the establishment of a windfirm leave-strip around the rocky ridge in that area. The location of the leave-strip shall be determined onsite by the licensee, Forest Service and Fish and Wildlife Branch.
- Rotational logging will be required adjacent to Areas 12 and 13 as well as the firebreak east of the winter range, thus ensuring continuous forage production to maintain the long-term carrying capacity of the mature timber for deer and other wildlife. A harvesting schedule for this area shall be determined in consultation among the Licensee, Forest Service and Fish and Wildlife Branch.
- In addition, the above management prescriptions apply to the timber in the two firebreaks immediately northeast and southeast of Areas 12 and 13, and to timber in portions of two other firebreaks below 860 metres with southern aspects. These four firebreaks all function as winter range.

Area #14

Resource values

- Recreation values are considered high.

Recommended management prescriptions

- Restriction of power boat use is recommended due to the size of Gracie Lake and to ensure maintenance of recreation and aesthetic values. The Forest Service has recently submitted an application for a power restriction.
- Aesthetic values must be taken into consideration during logging developement of this area.

Area #15

Resource values

- Fisheries values are high.
- Recreation values are high due to valuable sport fishing and aesthetic values.

Recommended management prescriptions

- Defer logging development to ensure maintenance of the fishing experience and recreation values of the area. The river channel in this constraint area is very unstable and any development activities will further aggravate the natural instability.

Area #16

This constraint area, shown on original maps, is no longer in existence because the bridge location has been altered.

Area #17

Resource values

- Fisheries values are high due to steelhead habitat.

Recommended management prescriptions

- A windfirm leave-strip is required above the high-water wetted perimeter of the river to ensure preservation of steelhead habitat and the sport fishing experience. The location and width of this leave-strip shall be determined during a multidisciplinary on-site inspection coordinated through the Forest Officer.

Area #18

Resource values

- Recreation values are moderate due to fishing opportunities.

Recommended management values

- Develop recreation sites in accordance with pressure exerted on recreation sites in the lower valley.
- Consider aesthetic values during planning of forest harvesting, even though this area is removed from Nahmint Lake itself.

7. Conclusions

The success of the Nahmint study, as in all such planning studies, will depend on considerable follow-up. The detailed and explicit constraints and recommendations for development of the area can only be satisfactorily supervised and enforced through careful, frequent field checking by personnel from MacMillan Bloedel and all government agencies having management and regulatory responsibilities for the area. The large database on the area's resources now available will be largely wasted if an awareness of its existence and the direction which can be drawn from it is not communicated to everyone working in the area, from recreation planners to grade shovel operators. This broad database must also be supplemented by more site-specific information related to the resolution of problems on the ground as they arise.

The participation of experts in various fields will be required in many cases if the broad objectives and recommendations resulting from the current study are to be realized.

Similarly, the application of the integrated planning approach of the Nahmint study to other areas will require substantial efforts in future from resource managers. Programs such as the 'integrated inventory' and use of low-level photography employed in the Nahmint study must be analyzed and revised before widespread application, and the successful implementation of such programs in future will require the expenditure of considerable time and effort by those who require the data which can be provided. Such time and effort unfortunately do not appear to be available due to staffing problems within many agencies, and the expansion of planning studies such as the Nahmint to cover a significant portion of the Vancouver District (and the province) will not be feasible unless some changes are made. The framework for widespread integrated planning is now available in the form of the Forest Service's 'folio system', but to produce detailed plans over a significant area each year would appear to require the establishment of a team of personnel from the various agencies, with adequate support staff and funding, who can concentrate full-time on such work. Without the commitment of these personnel and funds, the number of future integrated studies producing detailed information and plans will remain minimal.

Also, integrated studies on the scale of this project cannot be assumed to solve all problems of conflicting resource-use demands. The Nahmint study and others like it can help to ensure the production of a satisfactory mix of benefits from various areas within the framework of 'multiple use', but they will not solve the broader, regional questions of resource allocation which require designation of areas for single uses such as wilderness recreation and mineral production, or for 'non-use' such as some ecological reserves. It appears that the resolution of this type of question can best be dealt with through the integrated approach employed during the Nahmint study, but with some modifications such as changes in objectives and study group organization, and with the undertaking of large-scale, detailed public involvement programs. Efforts must be made to ensure that multiple-use studies such as the Nahmint study are implemented within this regional framework of resource allocation.

The planning meeting began with a review of resource priorities as viewed by the various agencies and the specification of those which were considered the most important in the Nahmint watershed. Specific recommendations and limitations on development were then prepared in line with these priorities, which were acceptable to each organization concerned. As in the Toquart study, those specific recommendations which did not apply to the whole watershed were related to landform units (see Table 3) or segments of landforms.

6. Development recommendations

6.1 Rationale

After a review of the resource values and potential uses of the Nahmint watershed by representatives of the various groups participating in the Nahmint study, it was obvious that there were three dominant values in the area at the present time which were far more important than any others. These were the fisheries and timber resources and a combination of factors providing a high potential for various forms of outdoor recreation. Other values such as wildlife and minerals are present but comparatively insignificant at present.

The question of how the various resource values of the area could most profitably, in terms of both monetary and social values, be provided to the public was a very important issue. It was recognized as possible that development of the watershed as a wilderness recreation area would result in substantial use by some residents of the Port Alberni area and other areas of the province. This type of development would require a change from the current multiple-use status of the Nahmint (as implied by its inclusion in TFL 44) to a single-use designation such as park status. However, this and other broad questions of regional resource use were beyond the scope of this study, and the study group's efforts were kept strictly within its terms of reference, i.e., "that of superimposing an acceptable pattern and level of logging on a compromised composite base of all other resource uses." Again, this is not to say that regional resource questions were considered unimportant, but only that the Nahmint study in concept and organization was not designed to deal with them.

Because of the multiple-use focus of the Nahmint study, recommendations for preservation of the Nahmint watershed as a wilderness area by public groups were not acted upon directly. Instead these indications of extreme public concern served to heighten the group's awareness of the need for careful protection of recreation values and for the development of facilities to meet heavy recreational pressure in future. Similarly, heavy fishing pressure experienced now at Nahmint Bay during chinook runs, and expected on Nahmint River and Lake as access is developed, indicated that careful protection of fish habitat would be necessary during road-building or logging activities.

It was also obvious that in some ways logging was desirable from other than monetary points of view. It is considered a certainty by Fish and Wildlife Branch personnel that logging will increase the local deer population. Also, access to the river, lakes and mountains of the area will be provided much sooner than would be the case if logging were prohibited, thus allowing more people to make use of the recreational attractions.

6.2 General recommendations

In view of the above facts and the importance of the timber in the area to MacMillan Bloedel's logging and conversion operations, and thus to the local and provincial economy, it was decided that portions of the Nahmint watershed could be logged, according to the conditions listed below. (Recommendations for recreational and other facilities are also included in the following sections.)

(A)

All logging, road construction and road maintenance activities must be of the highest standards and should be carefully supervised by the appropriate government agencies at all times (i.e. Forest Service, Fish and Wildlife Branch, Fisheries and Marine Service) to ensure maintenance of high water quality and protection of the aesthetic value of the area through 'clean' logging and elimination of unsightly road cuts and fills, material accumulations, etc.

(B)

Road construction in particular should only be carried on during favorable soil moisture conditions, where factors such as soil type, drainage, slope and proximity to water courses present a danger of sedimentation. Extreme care must be taken to ensure road-building is scheduled for materials of low-sedimentation potential, such as areas of rock or coarse-textured soils, whenever soil moisture is high. This will apply during much of the October to April period due to the intense and frequent rainfalls at that time, and during intense rainfalls or extended wet periods occurring during the summer months.

(C)

The Licensee must design and install specific drainage networks at each landing. The drainage should then be returned to a stable form as close as possible to its initial pattern when the area is abandoned.

(D)

The Licensee must make regular, frequent inspections of culverts and bridges during and following rainstorms and during periods when operations are shut down.

(E)

During road construction, newly-constructed roads must be ballasted with rock or clean gravel as quickly as possible. This will require a high level of co-ordination between construction activities and the supply of ballasting material. Should the availability of such materials make it impractical from the Licensee's point of view to have a supply ready at all times, compensation by the Forest Service for the costs of obtaining the required material will be considered.

(F)

Although based on very limited data, a reasonable flow for culvert design would be 400 cubic feet per second per square mile of drainage area above the culvert site. Where problems with culvert washouts due to inadequate size occur, a new culvert of upgraded size must be installed.

(G)

Where sidecast erodable materials will enter or approach a stream channel, these materials must be endhauled to a suitable area approved by a Forest Officer for disposal.

The above measures are designed to minimize sedimentation of the river system and preserve high water quality.

(H)

To preserve the stability of road cut and fill slopes and preserve the aesthetic appeal of the area, re-vegetation of bridge approaches, cutbanks and fill slopes should be provided where feasible.

(I)

To preserve the accessibility of all streams presently utilized by fish, alteration of the natural stream channel must be avoided at all crossings, whether bridges or culverts. Only wooden culverts or bridges are to be installed on all fish-bearing streams. Any unavoidable alteration of natural channels must be approved by an onsite inspection by a Fisheries Officer.

(J)

On colluvial and morainal veneers (see landform map*) no logging of slopes over 35 degrees will protect the stability of these materials. All road cuts on morainal blankets should be as close to vertical as possible. A long-distance yarding system should be considered on these materials and wherever else appropriate in order to minimize road mileage.

- *Available for viewing at Port Alberni Forest District Office*

(K)

In order to minimize the visual impact of clearcuts on the areas of highest recreational use, no clearcut patch of more than approximately 40 hectares (100 acres) in extent will be allowed within any area of the Nahmint watershed visible at close range from Nahmint Lake or from Alberni Inlet. At distances greater than approximately 3.5 km from Nahmint Bay and Nahmint Lake, slightly larger cutblocks will be considered, but will only be approved if the visual impact of this enlargement is considered insignificant due to the effect of distance. leave-strips between clearcut blocks throughout the watershed may not be less than 402 metres (20 chains or 1320 feet) in width, and must be windfirm and form viable units for future logging. Logging of leave-strips will only be allowed when adjacent logged areas have regrown sufficiently to satisfy aesthetic, reforestation, wildlife, and slope-stability requirements.

(L)

Unless specified otherwise below, cutblock size throughout the rest of the watershed will be limited to 120 hectares (300 acres) due to aesthetic considerations.

(M)

All clearcut patches must be shaped and oriented to fit natural landscape features in order to reduce biophysical and visual impacts to a minimum. Parameters to be considered include:

(i) local and regional topography
(ii) stability and sedimentation potential of surficial materials
(iii) relationships to sensitive areas including gullies, streams and areas where natural slides or avalanches occur
(iv) relationships to other activities (e.g. recreational developments)
(v) aesthetic characteristics
(vi) wildlife values (irregular block patterns and sizes provide more 'edge' habitat for ungulates).

(N)

Recreational developments in the locations noted in section 6.3 will be constructed as road access is developed. The responsibility for construction and maintenance of all recreation developments will be worked out between the Forest Service and MacMillan Bloedel Limited in the near future. All developments will be in accordance with Vancouver Forest District policy as follows:

Objective: To plan and provide for recreation within forests; to enhance public enjoyment of the outdoor experience as follows:

(i) Integrated-use principles are fundamental to the recreation program. No single-use recreation reserves are to be established, unless exceptionally high forest recreation potential is evident. All Forest Service recreation developments will be covered by a map notation.
(ii) The intent of forest recreation planning is to maintain the rustic forest environment. All operations are to be designed for minimum site disturbance.

(iii) Every site will be established in a fire-safe location to minimize the chance of forest fires caused by recreationists.

(iv) People will be spread out as much as possible in sanitation-oriented minimum-facility developments to avoid over-use and subsequent environmental degradation. No large, concentrated-facility campsites will be constructed.

(v) There will be proper servicing and maintenance for all forest recreation sites that are established. The necessary attention will be continual for 12 months of the year.

(vi) The forest recreation program will cater to local (British Columbia) inhabitants and will be designed to satisfy their requirements. There is not to be an intensive public information campaign.

(vii) Contributions by interested agencies and clubs should be limited to providing materials needed for recreation site development.

(viii) Winter recreation is an important part of the forest recreation program. Therefore, the Forest Service recreation responsibility is considered to be year-long.

(O)

In addition to all restrictions listed in this and the following section, a number of other limitations on logging and road-building activities are included as clauses in the contract document. These include the provisions that:

(i) Upon final cessation of operations or an annual termination of logging operations or at any other time as instructed by the Forest Officer, the Licensee shall construct water bars or open culverts to the specifications, number, and locations deemed necessary by the District Forester. In the event the Licensee fails to carry out the above measures the Regional Manager may assess the Licensee the estimated costs to carry out such measures, and the Licensee shall forthwith pay the account.

(ii) Yarding must be confined to high lead or other overhead systems. If methods other than overhead yarding are intended, the Licensee shall submit for the approval of the District Forester an operating plan designed to minimize erosion, siltation, and other forms of damage to the forest site.

(iii) The Licensee shall:
  (a) not allow any trees, logs, logging debris, or any substance likely to cause pollution, to be deposited at any time in any lake or stream;
  (b) not allow any logs to be skidded, equipment to be operated, gravel to be displaced or any damage to be done, within the high-water level of any stream channel;
  (c) provide all stream crossings with a bridge or culvert, the design of which will accommodate maximum stream flow and permit unobstructed fish passage and schedule the construction of all stream crossings as directed by the Forest Officer;
  (d) not place any obstruction or fill within the high-water level of any stream channel;
  (e) remove any logging, milling or road-building debris deposited in any stream channel or lake, as directed by the Forest Officer;
  (f) locate landings no closer than two chains from any stream channel, and only within areas designated for cutting;
  (g) direct the falling and yarding of trees away from streambanks and lakeshores except as otherwise designated on the ground and approved by the Forest Officer;
  (h) not burn slash closer to the streambanks or lakeshores other than the distance specified by the Forest Officer;
  (i) protect from logging and burning damage all streambank and lakeshore shrubs.

(P)

The design of roads, cutblocks and other developments such as gravel pits and waste areas must take into account both the principles outlined in the report *Nahmint Watershed Visual Impact Study* by S. R. Horner and future input from professional landscape architects.

(Q)

While no action has previously been taken in regard to cabins erected in trespass in the Nahmint drainage due to the limited access to the area, it is apparent that improved road access to the cabin sites will result in problems similar to those experienced with uncontrolled cabins throughout the province. These problems include vandalism, littering, increased fire hazard and conflicts between the builders of the cabins and other members of the public. For these reasons, all cabins existing in the Nahmint will be removed as roads approach the sites, either by the builders or, if necessary, by the Forest Service. Where further explanation of the rationale for removal of any of the cabins is considered appropriate, it will be included under the area-specific recommendations in Section 6.3.

(R)

The rail grade built during the 1930s along the north side of the lower river provides an ideal route for a main haul road due to the minimal disturbance necessary to upgrade this surface to haul-road quality, compared to the construction of a whole new road in another location. The main road must therefore follow the rail grade wherever possible.

(S)

Wherever leave-strips are prescribed along the river and lake in Section 6.3, a careful assessment must be made of blowdown intensity and the effects of blowdown on fish habitat, aesthetics and timber supply. If severe blowdown problems are encountered in the early stages of operations, leave-strip provisions may be revised to better protect the river or to lessen timber losses.

The exact boundaries of all leave-strips will be determined by an onsite inspection by Fisheries and Forest Officers, with the support of pedologists, hydrologists and other specialists where required. Leave-strip widths specified in Section 6.3 will serve as general guides only, and the actual widths of these strips can be expected to vary somewhat according to site-specific conditions.

6.3 Area-specific recommendations

The following recommendations apply to the areas designated on Map. In most cases the numbered units are derived from landform units or portions thereof. The landform map should be referred to for exact boundaries of the larger units.

(A)

Area 1 (Nahmint Bay) As indicated in the Parks Branch report *Recreational Use and Opportunity in the Nahmint Watershed Area* use of Nahmint Bay by sport fishermen is extremely high. In order to protect valuable fish and wildlife habitat and also maintain the aesthetic nature of this high-use area, it is recommended that no further development of any kind take place on shore within 40 metres (two chains or 132 feet) of the high-water mark at Nahmint Bay, and no further intensive commercial activities such as log storage or marina or camp developments be allowed within the limits of Nahmint Bay, as defined by Fisheries and Marine Service sport fishing boundaries. As Nahmint Bay is presently surrounded by an area of immature timber much wider than 40 metres, no logging will occur close to the bay for at least 30 years. When this timber reaches an age suitable for logging, careful re-examination of use patterns and levels in the bay area will be required before any timber removal is approved. While it is realized that the Indian Reserve within the Nahmint Bay area is not under provincial control, these recommendations are considered equally important on the Reserve lands.

(B)

Area 2 This unit contains the most important section of the Nahmint River in terms of salmon production, and is an area where the river channel is likely to shift frequently . No development other than a campsite at the location shown will be allowed in this unit. The cabin existing at this location will be removed prior to development of the campsite. Access to the campsite will be by trail leading from a parking area to be constructed along the main road.

(C)

Area 3 Due to the high fish production in portions of the river adjacent to this unit, the high intensity of stream channels and the sensitive surficial materials present, extreme care must be taken to minimize sedimentation and avoid alteration of the natural drainage pattern. For these reasons, road construction by grade shovel equipment only will be allowed. Wooden culverts or bridges will be required at all stream crossings. In addition, recommendations contained in the May 21, 1975 report by R. B. Townshend of MacMillan Bloedel's Land Use Planning Advisory Team must be strictly adhered to.

(D)

Area 4 (lower canyon) This area is one of the most heavily-fished regions of the river and will probably continue to be so in future, as steelhead are concentrated in the canyon pools by obstacles such as rocks and falls in the river. Timber quality and accessibility are both poor, and timber values are thus relatively unimportant compared to the high sport fishing potential. Therefore, to prevent any chance of blockage of the river channel with logging debris and to maintain the aesthetic appeal of the canyon, no logging will be allowed between the break in slope where the canyon walls begin and the river.

(E)

Area 5 Portions of this unit are flat and relatively distant from important fish-bearing streams, thus being ideal for dumping and storage of materials endhauled from road locations where sidecast materials would enter a stream. Appropriate sites within this unit for endhaul dumping will be selected by a Forest Officer.

(F)

Area 6 The recreational fishing value of this unit is very high. To protect the river, its banks and adjacent back and side channels and to maintain the quality of the sport fishing experience, a leave-strip of all mature and immature vegetation approximately 60 metres (three chains or 198 feet) in width will be required above the high water, wetted perimeter of the Nahmint River in this unit.

Notwithstanding the leave-strip provided for above, it is recognized that bridge location 4 as discussed in MacMillan Bloedel's report *Development Study - Nahmint River Watershed* within this unit is the best location available for a crossing of the lower Nahmint

River from both fisheries and engineering points of view. Road construction to and from this bridge location and construction activities in connection with the bridge itself will therefore be allowed within the leave-strip. All in-stream activities connected with construction of this bridge or any other construction must be cleared with the Fish and Wildlife Branch and the Fisheries and Marine Service.

The campsite locations within this unit are not the first priority areas, but will be developed if pressure on the lower campsite becomes excessive.

(G)

Area 7 These units are to be retained as "Primary Fire Breaks" in accordance with current Forest Service policy. This policy requires, as a guideline, that firebreaks be areas of closed-canopy timber at least 20 metres in height, with a stocking level of at least 74 stems per hectare (30 stems per acre) of dominant or codominant trees. Where firebreaks noted on Maps 3 and 4 end at the boundaries of the other units discussed in this section, the specific requirements applicable to these smaller areas will apply in the long run (the firebreaks are assumed to continue through these units).

Roads through firebreaks must be kept as narrow as possible. No 'day lighting' of roads in these areas will be allowed as this causes drying out of inflammable materials. All inflammable material along roads must be disposed of at the time of construction, and on old roads must be disposed of before use of the road begins again.

(H)

Area 8 (Nahmint Lake) Construction of a log boom across Nahmint Lake at its outlet or across Nahmint River near the lake may be desirable in order to prevent natural and logging debris from entering the lower river where severe jams could form. The magnitude of the debris problem will be examined over the next few years to determine the need for such a boom. This proposal would only be effective if regular, careful maintenance of the boom and removal of debris can be ensured. A cost of approximately $24,000 for initial construction and $10,000 annually for maintenance and debris removal has been estimated by MacMillan Bloedel Limited. This assumes removal of debris three times per year. A possible cost-sharing arrangement for construction and maintenance between the Forest Service, Fish and Wildlife Branch, Fisheries and Marine Service and MacMillan Bloedel will be investigated before road access reaches the lake.

Due to Nahmint Lake's sport fishing potential, its comparatively cold waters, and the ample availability in the area of large lakes suited for water sports such as waterskiing (e.g. Sproat and Great Central Lakes), a restriction on the use of powerboats on the lake is recommended in order to preserve the appeal of the lake for those wishing to pursue quieter activities such as fishing and canoeing. However, due to the size of Nahmint Lake and the frequent occurrence of strong, steady winds blowing up the lake, a complete power ban is considered unfeasible. A limitation of motor size to a maximum of 15 horsepower would allow boaters and fishermen to utilize all parts of the lake and should prevent excessive noise and activity from becoming a problem. The establishment of a power restriction to motors of 15 horsepower or less will therefore be investigated by the Forest Service before road access reaches the lake. Should an official power restriction be unobtainable for any reason, limitation of the size and type of boats to be allowed on the lake will be attempted through the provision of boat launching facilities suited to small boats only, as discussed in the next section.

(I)

Area 9 This area, the 200 to 400 metres of land immediately adjacent to Nahmint Lake's northeast shoreline, was the most controversial and one of the most sensitive units of the watershed. Due to its proximity to the lake, an area where recreational use is expected to be very high, particular concern was expressed over the need for preservation of the aesthetic appeal of the timbered shoreline. At the same time, this area contains the only economically-feasible route for a main road leading to the upper valley, considered desirable from recreational as well as logging economics points of view. This road was not a major concern, as it was felt that the location proposed by MacMillan Bloedel in their development study will not have an unacceptable impact on views from the lake, and will allow construction of boat-launch and campsite facilities.

The question of whether any logging should be allowed in this unit was another matter, however. While MacMillan Bloedel is very desirous of obtaining some timber from this area in order to help pay for the expensive road construction necessary, the visual impact of clearcut blocks visible from the lake was a major concern to the Forest Service recreation section. The only leave-strip requirements from a fisheries point of view are a 20 metre strip of immature and deciduous vegetation plus any 'leaners', completely around the lake. Such a strip is not considered sufficient to adequately protect the lake's aesthetic appeal. A much wider strip of mature timber would be preferable in some areas, however this cannot be applied as a blanket requirement due to the fact that slopes above this unit are so steep as to prohibit any logging using present technology. A very narrow strip, at most 400 metres in width, is possible to log, and further reduction of the width of this strip, through establishment of a large , inviolate leave area, would effectively eliminate all logging below approximately the 460 metre level. A standard width mature leave-strip is not specified, therefore, and any logging proposals in this strip will be further examined on a site-specific basis. However, some general conditions can be set:

(i) The maximum size of openings allowed adjacent to Nahmint Lake (below approximately 610 metres) will be 16 hectares.

(ii) Harvesting of this unit must be spread evenly over three logging passes (regeneration requirements will limit logging to, at most, one pass every seven years).

(iii) In planning cutblocks in the area, special attention mus t be paid to General Recommendation M in Section 6.2.

(iv) Along the lake below the small bay located approximately half way up the northeast shoreline, (marked 'H' on Map 3), variations in slope and terrain provide pleasing vistas from the lake and attractive stopping spots for boaters. In this section, logging below the main road will be allowed only to the extent required to provide tower guyline clearance as specified by the Worker's Compensation Board (varies up to approximately 100 metres according to timber type and terrain). Above this bay, extension of logging to the lakeshore will be considered, as slope and shoreline are relatively uniform. The 20-metre strip of deciduous and immature vegetation will be required here, as noted above and each proposed cutblock will be examined before approval of cutting to determine whether a wider leave-strip is required.

(v) The area of extensive blowdown near the southeast corner of the lake should be the first area logged, as it is unsightly and possibly dangerous to recreationists. While this area is exempt from the provisions mentioned just above, some widening of the immature and deciduous leave-strip may be necessary, following an on-site examination.

(vi) The provision of campsite and boat launch facilities along this shoreline is a high priority due to the heavy use the lake is expected to receive. Therefore, the campsites marked A, B, and C on Map 3 (and the boat launch area at A) must be retained within mature timber. This mature timber must extend to the main road upslope and approximately 200 metres on each side of the campsite.

The boat-launching facility near campsite A will have a gravel ramp into the lake and a parking lot on the terrace above, if a power restriction on the lake is obtained. The ramp will not be extended into the lake if no power restriction can be obtained, to reduce use of the lake by large, powerful boats.

Campsites A, B and C will be constructed according to demand, with A being the first priority due to its proximity to the boa-launch site.

(J)

Area 10 This unit, which falls within a firebreak, is the highest-priority area in the watershed in terms of recreation development. The combination of sandy beach, attractive creek-mouth, large, mature timber with little undergrowth, and dry, spacious terraces make it an ideal campsite location. Also, the upper reaches of the creek have numerous falls and cascades which add attraction to the area. The design for this campsite development will be drawn up when access is improved; however, tentative plans call for trail access only to the lake shore and adjacent campsites, with boat launching thereby restricted to canoes, rubber rafts and cartop boats at this location. Parking for cars and sites for campers and trailers will probably be provided on a terrace immediately below the main road location, approximately 200 metres from the beach.

A trail from the campsite uphill beside the creek to a large waterfall at an elevation of approximately 290 metres will be constructed to provide access to the many excellent viewing points along the creek.

(K)

Area 11 This unit and the basin of the creek flowing into Nahmint Lake immediately to the east, plus the slopes adjacent to the lower 1.6 km of the lake's southwest shoreline, are the only areas on the southwest shore of Nahmint Lake which are feasible to log using present technology. No specific restriction on logging the large creek basin or at the bottom end of the lake are considered necessary, other than the provision for the establishment of a leave-strip of mature timber along the lakeshore through on-site inspection before cutblock boundaries are approved. Because of the excellent beach in unit 11 (the best on the lake) and the adjacent area, which would be suitable for campsite development, this site will be retained longer than others in the watershed, but it is expected that abuse of the structure and other problems will require its removal once boat-launching facilities are provided on the lake.

(L)

Areas 12 and 13 The two units of Area 12, and Area 13 lie within a sub-drainage of the Nahmint watershed which is expected to produce significantly higher numbers of deer in response to an improved food supply following logging. In order to maintain a favorable juxtaposition of cover and feeding habitat over an extended period, and thus maintain a substantial long-term deer population, the following constraints will be applied:

(i) A minimum of 100 metres of timber is to be retained around the rocky ridge in Area 13. This timber will not be cut until the 'third pass' through the area in approximately 21 to 30 years in order to protect the value of the ridge as winter habitat until lower slope timber reaches a suitable age. Portions of this timber may be retained for longer periods if necessary.

(ii) Both units of Area 12, which contain scattered rock and tree cover suitable as winter habitat, will be retained until the third logging pass through the sub-drainage.

(iii) Cutting along both edges of the firebreak to the east of Areas 12 and 13 will be 'rotational', that is, a portion of the timber immediately adjacent to the firebreak will be cut during each logging pass. This will maintain a constant food supply adjacent to the cover available in the firebreak over at least a 30-year period. By the time the available timber in this sub-drainage has been logged, the presently immature timber on the lower slopes adjacent to Nahmint River should be suitable as winter habitat.

(M)

Rotational cutting as discussed above will also be required on both sides of the firebreak extending northeast above Area 10 at the top end of Nahmint Lake, in order to maintain good deer habitat over an extended period.

(N)

Area 14 (Gracie Lake) Due to Gracie Lake's very small size, the use of power boats on it is considered undesirable. A complete power ban on its waters will be investigated by the Forest Service.

(O)

Area 15 The river channel in this area is very unstable, and thus the potential for transport of sediment by the river is high. Fishing potential is good, and many portions of this unit are aesthetically appealing. Development of the campsite location at the northwest corner of the lake will focus recreational pressure on the river in this area.

For the above reasons, no logging development will be allowed in this unit.

(P)

Area 16 The proposed bridge crossing of the upper Nahmint River (see *Development Study - Nahmint River Watershed*) at the canyon immediately upstream from this unit is accepted as the most favorable crossing location on the upper river. The road approach to this crossing will require construction close to the river, in an extremely steep portion of this unit. Therefore, all vegetation must be maintained between the road and the river, and extreme care must be taken to minimize deposition of materials in the river during construction.

(Q)

Area 17 Preservation of steelhead habitat and the sport fishing experience, as well as the unstable nature of the river, necessitate the retention of a leave-strip of all mature and immature vegetation approximately 60 metres in width from the high-water, wetted perimeter of the river in this unit.

(R)

Area 18 (upper valley) Campsites noted in this area will be developed in accordance with pressure exerted on recreation developments in the lower valley. As this area contains many excessively steep slopes, special attention must be paid to General Recommendation J, Section 6.2 during planning of cutblock locations.

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Excerpt from:

British Columbia

Coastal Fisheries Forestry Guidelines 1988

Second Edition

B.C. Ministry of Forests
B.C. Ministry of Environment
Federal Department of Fisheries and Oceans
Council of Forest Industries

Preface

The Coastal Fisheries/Forestry Guidelines were developed by Industry and the agencies that jointly have direct control over integrated resource management in coastal watersheds. The purpose of the Guidelines is to provide a common basis for applying joint management principles to assist the agencies in achieving their respective objectives. Because these objectives are, to some degree, competitive and conflicting, their mutual full achievement will not always be possible within practical operating constraints .

The Guidelines consist of six documents. The first is a 'Statement of Principles' which outlines a number of operating principles with respect to management issues. Attached to this is a definition of the four classes of stream reach associated fish habitat management objectives. The third document is a 'Field Guide' which summarizes the major guidelines for all aspects of forestry operations to protect fish habitats in accordance with the field.

Additional detail and examples are presented in the 'Reference Guide'. The balance of the documentation is a glossary of terms used in the Guidelines and a set of appendices that contain special technical information and approved regulatory procedures established by government agencies.

These guidelines are not intended to be complete or definitive. They have been developed by consensus based on past operating experience and the most current research information. After being used for a trial period of two years throughout coastal British Columbia, these guidelines will be evaluated, refined and adjusted as required.

Finally, it should be emphasized that these Guidelines do not override or nullify the legislative mandate of management agencies. They serve to guide established management processes, but clear violations of these mandates will continue to be dealt with through existing legal procedures. Hopefully, the presence of the Guidelines will reduce such occurrences to a minimum.

Coastal fisheries/forestry guidelines

A statement of principles

The concept of integrated resource management recognizes that both forestry and fisheries share a common watershed base, and that strategies which enable the sustained development of timber and fisheries resources through protecting their productive capabilities will generate a higher net benefit than single-resource use. The objective of the Coastal Fisheries/Forestry Guidelines is, therefore, to maximize the net benefits of the combined fisheries and forestry resources, while minimizing time and cost.

The Coastal Fisheries/Forestry Guidelines have been developed to assist in integrating fisheries and forestry management in coastal British Columbia. They are intended to improve the performance and effectiveness of the consultative process required for fish habitat protection and concurrent forest harvesting management, but they are not intended to replace ongoing site inspections that are such an important aspect of integrated fisheries/forest management. Hence, these Guidelines strengthen the developing cooperation between resource-management agencies and the forest industry.

Based on this statement of philosophy, the coastal Fisheries/Forestry Guidelines warrant additional perspective and comment:

1. Forest management related to a range of fisheries values:

The stream reach classification system identifies a range of fisheries habitat values and is used as the basis for determining related forest management practices in watersheds. The objective of these Guidelines, as stated above, can be achieved by integrating forest-harvesting practices with fish habitat values.

Highest-value fisheries habitats (Class I) require the highest level of management effort, from both fisheries and forest managers, to maintain productive capabilities. Lowest-value habitats (Class IV) require minimal protection, with fisheries protection measures limited to those required in consideration of downstream impacts on higher-class reaches.

Use of these guidelines requires that stream reaches be classified for each watershed. Existing fisheries information is sufficient to determine stream reach classes in many watersheds, but in some watersheds additional inventory will be required. The required information will become available as the federal/provincial fish habitat inventory and information program is implemented. Occasional situations may arise where industry must change operational plans and move quickly into watersheds with no inventory adequate for stream classification; under such circumstances, industry and government would cooperate in obtaining the necessary inventory. Habitat management objectives are based on the stream reach-class, and assist in determining appropriate forest management practices. Where information obtained during forest operation development will occasion reclassification to a higher-order stream, adjustments to objectives may be necessary in consideration of the extent of the development that has already been committed.

The stream-reach classification system and the associated guidelines are based on a synthesis of research information from the Pacific Northwest (Oregon to Alaska) combined with field experience derived from the fisheries and forestry agencies and the forest industry. They support the development of on-site management decisions, and indicate where management attention should be focused.

2. Basis for stream classification:

The value of stream habitats determines the stream-reach class and includes consideration of fisheries management plans which have been approved at the Director level of Government for upgrading of specific reaches. Stream-reaches programmed for enhancement will be assigned the appropriate higher class. Stream-reaches not in the current program for enhancement at the time of logging plan development will be managed consistent with their present classification.

3. Rate-of-cut consideration:

While these guidelines address immediate site specific practices, the time period over which forest development plans apply may be less than that required for some biological and physical processes to occur. Consideration may, therefore, be required of the total area of timber harvested in a watershed over a given period of time. This rate-of-cut issue is presently being addressed by a fisheries-forestry technical committee. When the report is released and accepted, any pertinent recommendations will be included in these guidelines.

4. Resolving conflicts and uncertainty:

Even the best integrated management process can suffer from inadequate information or differences of opinion. The application of these guidelines will therefore always be guided by professional judgment and by common sense leading to the development of site-specific solutions to problems. When uncertainty exists, degree of risk and magnitude of potential effect on habitat must be considered and appropriate decisions made to minimize impact.

In the case of disagreement which cannot be resolved at the operational level, guidance from successively higher levels of management will be sought, in accordance with the inter-agency Agreement on Resource Management Conflict Resolution between the Ministry of Forests, the Ministry of Environment, and the Department of Fisheries and Oceans (Appendix I).

5. Training and information requirements:

Understanding the stream classification system, taking management decisions in the field and making use of tools available to fisheries and forestry managers, require education and training. Training programs will be conducted for all involved staff to facilitate mutual understanding of these guidelines and their effective application in the field

A Field Guide for field staff has been developed which, in combination with this Statement of Principles and the Reference Guide, will form the Coastal Fisheries/Forestry Guidelines. These guidelines will be reviewed and updated as required and the training programs will be repeated from time to time.

6. Monitoring and evaluation:

The effectiveness of these guidelines in terms of achieving their objective for maximizing net benefits will be monitored. This monitoring program will include assessing costs to the forest resource to protect fisheries habitat values, the degree to which fish habitat objectives have been achieved, and the efficiency in reducing and resolving conflicts and making management decisions in the field.

Stream reach specifications and objectives

Class I

Anadromous salmonids or moderate to high levels of resident sports fish are present, or the reach has been identified for upgrading in an approved fisheries management plan. Stream gradient is usually less than 8 per cent. The objective is to maintain productive capacity of the fish habitats including water quality and stream channel characteristics. To provide flexibility, it may be necessary to design compensating or mitigating measures which offset the unavoidable effects which even careful forest harvesting may have on a stream system.

Class II

Low levels of resident sport fish are present. Stream gradient is usually eight - 12per cent. The objective is to minimize loss of productive capacity of the fish habitats and maintain sufficient stream channel integrity to protect Class I reaches from accelerated transport of sediment or debris.

Class III

Resident non-sport are present. Stream gradient is usually eight - 20 per cent. The objective is to maintain the genetic stock of indigenous species and maintain sufficient stream channel integrity to protect t Class I, and Class II reaches which may be impacted from accelerated transport of sediment or debris.

Class IV

No fish are present and stream gradient is usually greater than 20 per cent. The objective is to maintain sufficient stream channel integrity to protect Class I, and Class II reaches which may be impacted from accelerated transport of sediment or debris.

Coastal fisheries/forestry guidelines

Reference guide

The following presents the planning and operational guidelines applicable to the four Stream-Reach Classes for each forest harvesting and silvicultural phase. As early as possible, industry should identify proposed areas for logging which require additional information for stream classification in order to identify important stream values when information is not available. All phases of harvesting should be planned with due consideration to the distribution of stream-reach classes and the potential for downstream impacts in the watershed. Sufficient data should be acquired which are pertinent to all phases of forest management activities, such as maps of bedrock geology, surficial geology, soil types and stability hazards. These maps should be used to identify potentially unstable slopes for which more detailed studies may be required.

The stream reach classes to which guidelines are applicable are indicated by]]]. An * indicates that the guidelines apply only when class I or II reaches downstream may be impacted.

Stream reach class
I II III IV

1.0 Planning and construction for roads and landings:

1.1 General

1.1.1.]]]]]]]]]]]]]]]]]]

Consider the logging system, logging pattern and special road building techniques, such as endhauling, to minimize soil disturbance. Plan road layout to permit efficient forest access development and harvesting, and environmental protection. Timing of construction or special measures should be related to the value of reach classes.

1.1.2.]]]]]]]]]]]]]]]]]]

Take advantage of stable benches, ridge tops and gentle slopes. Avoid midslope roads wherever possible, particularly if a problem is identified.

1.1.3.]]]]]]]] • •

Plan and construct roads a reasonable distance from Fisheries Sensitive Zones, to maintain vegetation and prevent instream damage and downstream sedimentation.

1.1.4.]]]]]]]]]]]]]]]]]]

Construct roads to avoid areas with evidence of slope instability, unless the alignment is the best alternative and special design features which will prevent damage are incorporated into the plan. Where it is agreed by agency staff that short sections of road must be constructed through highly-sensitive areas, there must be a critical evaluation with special construction restraints applied.

1.1.5.]]]]]]]] • •

Stop construction during extremely unfavourable soil moisture conditions where siltation or debris will threaten fisheries values. Resume operations when conditions permit. It may be necessary to temporarily modify the site to ensure that erosion during the shutdown is minimized.

Stream reach class
I II III IV

1.1.6.]]]]]]]] • •

Avoid depositing construction debris or sidecast into any waterbody or at a location where it may subsequently enter a waterbody.

1.2 Right of way felling, clearing and subgrade construction:

1.2.1.]]]]]]]] • •

Give preference to the use of backhoes to minimize sidecasting and erosion in areas with steep slopes, unstable terrain, soils with low bearing strength, or high seepage. Crawler tractors should not be used in these areas.

1.2.2.]]]]]]]] • •

Where possible, fall right-of-way trees away from stream reaches.

1.2.3.]]]]]]]] • •

Stumps or organic material should not be incorporated into the subgrade where there is potential for failure into a watercourse.

1.2.4.]]]]]]]] • •

Ensure that subgrade is adequately drained during construction. (See Sec 1.7)

1.2.5.]]]]]]]] • •

Maintain slope stability during subgrade construction. If slides do occur during road construction, stop operation and notify the Forest Officer immediately.

1.2.6.]]]]]]]]

Where possible, rock from blasting operations should not enter stream reaches.

Stream reach class
I II III IV

1.3 Ballasting and surfacing:

1.3.1. IIIIIIIIIIIIIIIIII

Mininize road surface erosion by the use of suitable surface materials for the anticipated speed and traffic frequency.

1.3.2. IIIIIIIII • •

The ballast should be of sufficient depth to elevate the road surface above the water table during the operating period.

1.4 Pits and surfacing:

1.4.1. IIIIIIIII • •

Control water drainage from pits and quarries to prevent eroded material or other deleterious products from entering streams.

1.4.2. IIIIIIIII • •

Gravel removal from the stream channel requires approval of a Fisheries Officer.

1.5 Fuel storage:

1.5.1. IIIIIIIIIIIIIIIIII

Avoid fuel spillage or the potential for spillage when storing fuel and during fueling operations.

1.5.2. IIIIIIIIIIIIIIIIII

Construct impermeable berms around storage areas to comply with existing government regulation (Appendix X.)

1.6 Cuts and fills

1.6.1. IIIIIIIII • •

Avoid cuts and fills which have the potential to directly affect stream channels; however, if considered absolutely necessary, ensure that:

a) Cut and fill slopes are designed and constructed at a stable angle of repose or less. (See Minimum road specs , Appendix A.3).
b) Full bench construction is recommended on steep slopes and sensitive sites.
c) Sidecasting is not carried out on or above areas with potentially unstable accumulations of organic debris.
d) On steep cut and fill slopes in sensitive areas, stabilization efforts are to be initiated immediately (e.g. terracing, revegation, cribwork, slope rounding).

Stream reach class
I II III IV

1.7 Drainage, including bridges and culverts: (See Appendix V, Min. Road Specs.)

1.7.1. IIIIIIIIIIIIIIIIII

Identify continuous and intermittent streams for drainage planning purposes at the time of road survey and determination of location.

1.7.2. IIIIIIIIIIIIIIIIII

Ensure that the road drainage design is adequate for the handling of interrupted surface and sub-surface water flows. Install sufficient culverts to reduce the volume of ditch water and prevent ditch erosion, especially where significant groundwater is intercepted on steep slopes.

1.7.3. IIIIIIIIIIIIIIIIII

Provide adequate drainage for watercourses concurrently with subgrade construction and install all drainage structures by the time ballasting is completed.

1.7.4. IIIIIIIIIIIIIIIIII

Provide adequate drainage at all road junctions.

1.7.5. IIIIIII

The use of wooden culverts or pipe arches is preferred to provide for fish passage. Other provisions include:

a) The design of drainage structures to maintain the width of the active stream channel.
b) The maintenance of the natural stream gradient under the crossing structure (metal pipes should be partially buried in the streambed).

1.7.6. IIIIIIIII • •

When erosion is expected, direct culvert outflow to natural channels, non-erodible surfaces or suitable energy dissipating devices.

1.7.7. IIIIIIIIIIIIIIIIII

Construct catch basins at culvert intakes of sufficient size to collect transported sediment and debris.

1.7.8. IIIIIIIIIIIIIIIIII

Clear debris from catch basins and channels, preferrably during low flow conditions, to prevent blockage of culverts.

1.7.9. IIIIIIIIIIIIIIIIII

Design culvert and bridge capacity of adequate size to avoid channel scouring and road washouts.

Stream reach class
I II III IV

1.7.10.]]]]]]] • •

Satisfy recommended timing constraints for construction. (See guideline 2.5.4.)

1.7.11.]]]]]]] • •

Bridge abutments should not encroach within the high-water mark of the stream channel.

1.7.12.]]]]]]] • •

Bridge construction should avoid scour, siltation, erosion and stream habitat damage.

1.7.13.]]]]]]]

Minimize the use of machines in streams. Stream fording with equipment should be at one location only. Obtain approval for the instream operation of equipment from the Fisheries Agencies.

1.7.14. • •

Obtain approval for instream operation of equipment from Fisheries Agencies for bridge construction in areas of sensitive soils.

1.8 Maintenance of active use logging roads:

1.8.1.]]]]]]]]]]]]]]]]]]]

Retain the integrity of the road surface, drainage structures and water quality throughout the maintenance program.

1.8.2.]]]]]]]]]]]]]]]]]]]

Conduct intensive maintenance as per MOFL minimum road specifications prior to long shutdowns and peak stream flow periods, e.g. culvert and ditch cleanout, cross ditching, etc

1.9 Maintenance of inactive logging roads:

Identify roads after harvesting as either "limited access" or "abandoned".

1.9.1. Limited access roads]]]]]]]]]]]]]]]]]]]

Take the following steps for long term road stabilization:

a) Remove culverts that demonstrate a serious maintenance problem.
b) Cut cross ditches to further reduce the volume of ditch water and to re-establish natural flow patterns.
c) Where openfaced culverts or cross drains are used on inactive roads (for waterflow across the road), provide for a non-erodible armouring surface.

Stream reach class
I II III IV

1.9.2. Abandoned roads]]]]]]]]]]]]]]]]]]]

Take the following steps for permanent road stabilization:

a) Leave roads in a condition suitable to minimize erosion, e.g. remove culverts and road fill material from gullies and stream channels to permit open flow and stable channel conditions. Revegetation may be required.
b) Stabilize existing surface drainage patterns and deposit excavated material in a stable location.
c) Frequent cross ditches may be required on steep grades.

2.0 Planning and operations for falling and yarding:

2.1 General

2.1.1.]]]]]]]]]]]]]]]]]]]

Include the following information and/or interpretations, when available, during the preparation of a Five Year Development Plan: location, extent and configuration of blocks; topographic details; windthrow potential; landing locations; season of extraction; terrain-stability maps or data; E.S.A. information; and any other relevant data to identify high-risk areas.

2.1.2.]]]]]]]]]]]]]]]]]]]

Evaluate landslide and erosion hazards in steep or otherwise unstable areas where a relatively small disturbance may lead to a debris torrent, mass wasting or erosion problem (slumps, landslides, rilling, etc.). Where these hazards exist, harvesting will require special measures.

2.1.3.]]]]]]]]]]]]]]]]]]]

Cable yarding or aerial (helicopter and balloon) systems are preferred as they create less ground disturbance.

2.1.4.]]]]]]]]]]]]]]]]]]]

Yarding uphill wherever possible to minimize the risk of yarding across or adjacent to streams and to minimize the valley bottom concentration or convergence of erosion channels that may be caused by downhill yarding.

2.2 Ground skidding systems:

Stream reach class
I II III IV

2.2.1.]]]]]]]]]]]]]]]]]

Generally, these systems should not be employed on slopes greater than 30 per cent.

2.2.2.]]]]]]]] • •

Prevent soil erosion and resulting stream sedimentation and preserve the natural stream bank integrity, water flow and water quality by:

a) Locating major skid roads prior to the commencement of skidding, especially for winter skidding operations, to avoid continual and random stream crossing. Choose locations that avoid erodible soils.
b) Minimizing the length of skid roads to reduce erosion potential.
c) In areas which have erosion problems during high soil moisture conditions, suspending skidding operations.

2.2.3.]]]]]]]] • •

Locate landings away from active or ephemeral streams or zones of soil seepage.

2.2.4.]]]]]]] • •

Design skid roads to avoid Fisheries Sensitive zones, e.g. active flood plains, stream bottoms, etc.

2.2.5.]]]]]]]] • •

Avoid skid roads with continuous steep grades. Where steep grades are necessary, construct water bars to divert runoff to undisturbed areas.

2.3 Helicopter or balloon systems:

2.3.1.]]]]]]]] • •

Plan helicopter or balloon yarding systems considering the effects of flight paths, block configuration and staging areas on potential slash accumulation and debris fallout problems, to ensure water systems are not polluted or obstructed.

2.3.2.]]]]]]] • •

Apply debris management guidelines when flight lines are over open water, including stream channels.

2.3.3.]]]]]]]]]]]]]]]]]]

Limb at the setting.

2.3.4.]]]]]]]]

Locate drop sites away from Fisheries Sensitive Zones such as estuaries and shellfish beds, or productive lake littoral zones.

Stream reach class
I II III IV

2.3.5.]]]]]]]

Locate drop sites and log handling areas beyond the littorial zone in both marine and freshwater systems (or beyond 10 m depth).

2.3.6.]]]]]]]]

Recover floating and sinking debris in Fisheries Sensitive zones to reduce the physical impact and chemical contamination of the water. This could involve:

a) Perimeter containment booms.
b) Periodic surface sweeping of the drop area.
c) Dredging of the bottom debris.
d) Disposal of debris by burning or transport to an acceptable location.

2.4 "A" Frame and handlogging systems:

2.4.1.

"A" frame and handlogging operations have the potential to physically damage the site or deposit large quantities of debris in water. Therefore, only consider them in deeper water locations (beyond the 10 meter depth) well away from Fisheries Sensitive Zones.

2.4.2

Take the following measures to reduce any potential slash and debris problems:

a) Employ perimeter containment booms.
b) Minimize falling into the water.
c) Buck and limb on land.
d) Remove contained debris and either place it back on shore in a stable location or dispose of it at an acceptable location.

2.5 Streamside areas

2.5.1.]]]]]]]]

Protect Fisheries Sensitive Zones.

2.5.2.]]]]]]]]]

Consider the impacts of harvesting operations on downstream values, e.g. Fisheries Sensitive Zones, community water supply, etc.

2.5.3.]]]]]]]] • •

Consider the potential for windthrow and the consequences if it should occur, e.g. special circumstances such as high windthrow risk will require consideration that only one side of a valley be developed at one time and development of the remaining side be delayed until the logged areas have stabilized.

Stream reach class
I II III IV

2.5.4.]]]]]]] • •

Take timing constraints into consideration relative to fish life history phases, expected stream flows, debris management, operations on floodplains or extremely wet soil moisture conditions. Preference is given to periods of summer low flow for instream activities. Consultation with the local DFO and MOE & P staff any afford site specific variation, e.g. "Operating Window" usually relates to June 1 - September 15; Queen Charlotte Islands: June 1 - August 15. (See Appendix II).

2.5.5.]]]]]]]]

Delineate and protect a streamside management zone or leave strip which will provide: streambank and riparian vegetation stability; future source of large organic debris (L.O.D.).

2.5.6.]]]]]]]]

To prevent forest site loss on major Class III and IV streams where bank stability or large organic debris is playing a significant role *in stabilizing the channel,* mature streamside trees may be required as a future source of L.O.D. Heavy leaners, snags and danger trees will serve this purpose.

2.5.7.]]]]]]] • •

In streamside areas prone to blowdown, employ directional falling to remove merchantable trees. Heavy leaners and danger trees may be either left standing or fallen directly across the stream based on an on-site inspection with Fisheries Agencies. Where yarding of these trees will create streambank or instream damage, leave a portion of the stem (a "bridge") spanning the creek in a stable position. This *may* apply to major streams of Class III and IV.

2.5.8.]]]]]]]]

The streamside management zone *may* include protection of snags, where compatible with Workers' Compensation guidelines, or leaving of non-merchantable trees as a future supply of snags or L.O.D. In addition, non-merchantable conifers or alder may have to be retained in the streamside zone to provide nest sites for cavity nesting birds and perching, or nest sites for raptors.

2.5.9.]]]]

Consider ways to *prevent* the introduction of debris such as: fall away, yard away.

2.5.10.]]]]]]]]

Use streams as lateral boundaries for yarding roads, unless topographic and/or deflection conditions will ensure no disturbance of streamside vegetation and/or deflection conditions will ensure no disturbance of streamside vegetation and/or damage of instream habitat. RR

Stream reach class
I II III IV

2.5.11

The potential for cross-stream yarding is influenced by:

i) stream bank stability;
ii) instream L.O.D.;
iii) stream capability to transport debris.

]]]]]]]] • •

a) If banks are unstable, the area has gullied terrain with deep soils, or L.O.D. is stabilizing the channel and logging may disturb or destabilize these conditions, then fall and yard away.

• •

b) If banks are stable and the channel is not dependent on L.O.D. for stability, then consider the potential for falling across and yarding over the channel subject to debris transport capability evaluation:

i) if the channel does not have the capability to transport debris, then cross stream falling and yarding may be undertaken without debris clean out.

ii) if the channel has the capability to transport debris, then minimize debris entering the channel as debris clean-up will be required;

- Debris entry into watercourses can be minimized by such methods as directional falling or appropriate yarding systems.
- As an alternative to onsite debris cleanup, consider the use of a debris trap or grizzley. Debris traps may only be used where the channel is stabilized by bedrock or boulders and an accessible, stable site exists for trap installation and debris removal.
- The operation should be carried out with consideration to seasonal timing (See Appendix II).

2.5.12.]]]]]]]] • •

Where stream clean-up of moving debris is recommended it must be carefully supervised. It is possible to destroy useful habitat through over-zealous clearance programs. Clean-up may have to be conducted in two phases:

a) Immediately following or concurrently with logging.
b) Following the fires freshet or series of freshets after logging.

2.6 Post-operational:

2.6.1.]]]]]]]]]]]]]]]]]]

In the event of slope instability or accelerated erosion in a cutblock after logging operations, stabilization measures should be taken to maintain forest site productivity and to minimize stream impacts.

Stream reach class
I II III IV

2.6.2.]]]]]]]] • •

If streambank erosion is occurring or has potential to occur, consider planting grasses, brush or tree species, or placing organic or inorganic armouring material to prevent streambank erosion or sedimentation.

3.0 Planning and operations for silviculture

3.1 Silvicultural considerations in harvesting layout and method:

3.1.1.]]]]]]]] • •

Identify potential silviculture problem sites at the time of preharvest assessment and develop the most feasible plan to minimize problems with available engineering advice.

3.1.2.]]]]]]]] • •

Choose strategies and equipment to minimize ground disturbance where brush competition and erosion are problems. Excessive soil disturbance not only leads to erosion which may cause siltation in streams, it also promotes brush encroachment. Avoid exposure of mineral soils (e.g. by scarification).

3.1.3.]]]]]]]]]]]]]]]]]]

Where it has been determined that slashburning will be part of the post-harvest treatment, layout harvest boundaries to facilitate the protection of established streamside management zones.

3.1.4.]]]]]]]] • •

Design block layout to facilitate possible use of aerial methods if fertilizer or herbicide application is expected (see Section 3.2).

3.2 Brush and streamside deciduous tree control

(No part in 3.2 supercedes conditions of a Pesticide Use Permit.)

3.2.1.]]]]]]]]

Assess the need for alder seed tree control during the pre- harvest planning stage. Treat streamside alder throughout all phases of logging and silviculture accordingly. This should be reviewed whenever possible during the Five Year Development Plan meeting.

3.2.2.]]]]]]]] • •

Where necessary, design a roadside brush control program to minimize the spread of brush into plantations.

Stream reach class
I II III IV

3.2.3.]]]]]]]]]]]]]]]]]]

Avoid brush control on streamside and upland sites that are dependent on live root systems for stability.

3.2.4.]]]]]]]]]]]]]]]]]]

Protect a streamside management zone or leave strip established during the harvesting phase when using either mechanical or herbicide brush control methods.

3.2.5.]]]]]]]] • •

Maintain deciduous tree and brush species, in particular alder, where they are considered to be important for erosion control, stabilization of the streambank, cover or water temperature control. Consult with Fisheries Agencies and MOFL prior to the removal of streamside vegetation.

3.2.6. A.]]]]]]]]

Retain streamside alder seed trees unless sufficient streamside vegetation is present to adequately provide for stream productivity and the alder to be treated are not contributing to streambank and channel stability.

B.

Alder present on high-site flood plains adjacent to small, low energy tributaries and swamps may be removed, provided other deciduous vegetation or juvenile alder, less than 7m, are present to provide streambank stability, adequate cover and biomass inputs.

3.2.7.]]]]]]]] • •

Where streamside alder removal has been approved by Fisheries Agencies and MOFL, consider mechanical removal, possibly during the harvesting phase. Cutting so as to leave high stumps and falling away from the stream are preferred to either girdling or herbicide applications because the former promotes coppicing and maintenance of the living roots. Consider other methods to promote coppicing.

3.2.8.]]]]]]]] • •

Where approved to mechanically treat stands of mature or juvenile streamside deciduous trees in areas where they occur in uniform, extensive stands, carry out the treatment over a time phase sequence . Clean the stream channel of any debris resulting from deciduous tree control activities.

Stream reach class
I II III IV

3.2.9.]]]]]]]]]]]]]]]]]

Herbicide use, including individual tree treatment, is generally not acceptable within 10 m of watercourses. For any herbicide applications considered within 10 m of watercourses, obtain approval from Fisheries Agencies or Pesticide Control Branch on a site specific basis. Ensure that the intended treatment is stipulated in the Pesticide Use Permit.

3.2.10]]]]]]]]] • •

Identify and take measures as necessary to protect pesticide free zones as required by the Pesticide Use Permit. Ensure that small sidechannels and other waterbodies connected by streams, which are often obscured by brush cover, are located and protected.

3.2.11.]]]]]]]]] • •

Where practical, use ground based treatments rather than aerial treatments. The buffer zone for ground based applications will be much smaller than for aerial applications.

3.2.12.]]]]]]]]] • •

Conduct aerial applications with staff experienced in that method of application. Leave appropriate buffer zones and use ground application methods to ensure that the pesticide free zone is maintained along waterbodies. Take all precautions to minimize drift.

3.3. Site preparation by scarification:

3.3.1.]]]]]]]]]]]]]]]]]]

Scarify only those areas not included in the streamside management zones, fisheries sensitive zones, or leave strips established during the falling and yarding phase.

3.3.2.]]]]]]]]] • •

Scarify only those sites which are not susceptible to erosion or debris transport from flooding.

3.3.3.]]]]]]]]]]]]]]]]]]

Avoid moving large organic debris which is associated with the stream channel and extends outside the streamside management zone or leave strip.

3.4 Site preparation by prescribed fire:

3.4.1.]]]]]]]]]]]]]]]]]]

Burn only those areas not included in streamside management zones or leave strips established during the falling and yarding phase. Special measures may be required to protect no-treatment zones, e.g. sprinklers.

Stream reach class
I II III IV

3.4.2.]]]]

Avoid use of equipment to create fireguards adjacent to Class I waters where connecting sidechannels may be disturbed.

3.5. Fertilizer application:

These guidelines apply to the application of pelletized area only. Special measures may be required for the use of other fertilizers.

The guidelines are applied on a watershed basis rather than on a stream reach basis. .RR

3.5.1.

Plan for fall/early winter as primary application times.

3.5.2.

In nutrient sensitive watersheds, the area approved for fertilization will be determined by the acceptable level of nitrogen loading to the stream.

3.5.3.

Heliports should be located in dry areas, well removed from ditches or natural water bodies. Any drainage through heliports must be directed away from ditches or natural water bodies prior to use.

3.5.4.

For those water bodies requiring a fertilizer free zone (FFZ), provide a 30 m FFZ in nutrient sensitive watersheds and a 10 m FFZ in non-sensitive watersheds.

3.5.5.

Treatment boundaries are to be laid out so as to avoid inclusion of water bodies requiring a FFZ within the block. If this cannot be accommodated, then lines should be flown parallel to the creek or water body to provide a buffer before applying fertilizer to the remainder of the block.

3.5.6.

Flight lines should be laid out so as to avoid deposition of fertilizer within defined fertilizer free zones. Flagging of the zone may be required on a channel which has open water but may not be observed as such at the time of application.

File: ________________
Date: ________________
Road Class: ______________

British Columbia Forest Service

Engineering specifications for the planning, location, design, construction, maintenance and deactivation of logging roads and drainage structures in the Vancouver forest region

I. Engineering policy

A. With due consideration for the protection of soils, site productivity, fisheries, water quality, other resource values and for the appearance of forest landscapes in visually sensitive areas, the location and design (alignments and gradients) of all logging roads, including skid and back spar trails and drainage structures, shall be such that the combined costs of construction, log hauling, maintenance, safety requirements, avoidable site degradation, remedial prescriptions and deactivation are minimized. Competent personnel utilizing accepted engineering principles shall be employed in the planning, location, design, construction, inspecting, maintenance, repairs and deactivation of all works.

The latest versions of the B.C.I.T. *Manual for Roads and Transportation (I and II)*, the F.E.R.I.C. *Log Bridge Construction Handbook*, *Environmental Objectives and Procedures for Water Crossings* (MOE Report #6), or other specified Forest Service publications are the references for accepted engineering principles and requirements.

B. The amount of road and trail built shall be minimized in conjunction with logging layout.

Avoid locating roads through unstable areas, areas sensitive to road construction and wherever other resources are threatened.

If it is deemed necessary to traverse such areas then site-specific survey, design and construction techniques shall be proposed by ___________ for the review and approval of _________.

C. When construction is finished, maintain the road surface for economical hauling; ditches and culverts for efficient drainage; and bridges for safe carrying capacity. Brush and debris are to be removed from the right-of-way as required for safe visibility.

Protect the road bed from erosion caused by water emanating from snow banks left from snow plowing. Crown the road surface or construct swales or waterbars.

D. Traffic control devices and kilometre signs shall be located and installed as required.

E. The Licencee shall not place any gate or other obstruction(s) on or over any road constructed and/or maintained under their licence unless otherwise approved in writing by the Forest Officer.

F. The Licensee is responsible for reviewing these specifications with all his employees and contractors associated with road work.

G. All roads, skid and back spar trails shall be deactivated after logging use in accordance with Part VIII, unless otherwise directed by ________. If practical this will be done in such a manner to provide two-or four-wheel-drive access.

H. All roads are subject to the various applicable Acts and Regulations.

I. Plans, profiles (1:2,000 horizontal, 1:200 vertical scale) and other specified road data, showing culvert and bridge locations, are to be submitted for approval by the District Manager, for all roads proposed within Forest Service Road right-of-way corridors and elsewhere when required by the District Manager, prior to commencement of construction.

J. The following specifications may be modified or amended only with the approval of __________. Design and/or construction prescriptions may be added to meet unusual or special conditions.

II. General road construction specifications

A. Right-of-way clearing, grubbing, and slash disposal:

1. Fall all trees within the right-of-way area three meters beyond the top of cuts, and 3 metres beyond the toe of fills, unless increasing or decreasing this width will increase the stability of cut or fill slopes or improve aesthetics. Any such deviation requires the approval of __________.
   Fall leaners and damaged trees adjacent to the right-of-way, and yard these together with any trees that were felled into standing timber into the right-of-way.
2. Recover and protect merchantable logs prior to subgrade construction. Logs may be used for culverts and bridges and, along with slash and stumps, for road puncheon provided their use is economical and prior approval has been given by _________.
3. Remove stumps and organic soil as dictated by depth of overburden, sideslopes and centreline cuts. For overlanding, the site may be left in its natural state.
4. Treat clearing slash and non-merchantable wood by scarifying, burying, burning or as directed by __________.

B. Subgrade excavation:

1. Ensure adequate drainage is provided and maintained during the subgrade excavation stage and is fully functioning for periods of temporary or seasonal shutdowns.
2. Drill and blast rock in a manner that minimizes damage to standing or felled timber, growing sites and other resources.
3. In unstable rock formations take the necessary precautions (i.e. choice of blasting agents, drilling patterns, size of blast, professional advice, etc.) to prevent initiating slides or slope instability.

4. Design and construct cut and fill slopes to suit the local soil and rock types. Cut slopes must minimize the combined costs and effects of ditch maintenance, erosion and site disturbance. See attached FS650. Avoid creating concave shaped cutslopes and round off the tops of cuts.
5. Adopt measures to stabilize or protect cut and fill slopes where instability or erosion problems exist.
6. Sidecasting onto or into:
   a. plantations
   b. aesthetically sensitive slopes
   c. unstable slopes or slopes that become unstable due to sidecasting
   d. gullies
   e. private properties
   f. other problem slopes or areas
   g. any body of water is not permitted unless approved by ________. Site specific constraints will be issued or approved by ________ for the removal and deposition of the excavated material within such areas and any remedial measures that are required.
7. Balance cuts and fills where possible and utilize subgrade material for fills, ballast or surfacing wherever practical.

C. Ballasting and surfacing:

Place sufficient ballast or surfacing material to carry loaded (design load) logging trucks, and other logging equipment without detrimental rutting or deforming the road surface. Give due consideration to the planned traffic frequency, quality of ballast and surfacing materials, and required maintenance.

D. Turnouts:

Locate turnouts to augment safe, economical hauling. Generally, roads having high density traffic require intervisible turnouts eight to10 metres wide including the road, and a useable length of 30 metres.

E. Widenings:

Widen all curves to allow for side tracking of truck-trailer units. Widen blind curves or provide safety measures (i.e. sign posts , turn-outs, radio call out messages) commensurate with the existing hazard, economics and site impact requirements.

F. Sight and stopping distance:

Provide sight and stopping distance at all road junctions commensurate with grades, alignment and traffic density. The ideal junction provides a stopping distance and a clear view in both directions for the truck entering the mainline.

Ensure drainage is provided by installing adequately sized culverts and ditching network.

III. Pits and quarries

Obtain approval of __________ for pits and quarries that will extend beyond the right-of-way boundaries. Clear the pit area and dispose of slash as per II.A. Dress the slopes to a natural angle of repose before abandoning the pit if deemed necessary by ________.

IV. Drainage structures (bridges, culverts, fords and ditches)

All bridges constructed of glulam, concrete or steel, all metal culverts 1,800 mm and over in diameter and all retaining walls shall be designed and sealed by a professional engineer registered in B.C. Included in the design is the hydrological and hydraulic analysis to determine the opening size and scour protection requirements.

Upon completion of construction an as-built drawing sealed by the design engineer shall be kept by the Licencee.

Design and install or construct all drainage structures in accordance with accepted engineering principles to carry the design load and pass the specified peak flood. Incorporate measures to pass or trap debris and clean out such traps as required.

Ensure that other resource agencies' (local, provincial, federal) concerns have been incorporated into the design and that required approvals and permits have been obtained.

A. Bridges

Bridges are defined as structures over 6 metres in span.

Locate, design and construct bridges which will pass the designated flood and anticipated debris for the following:

1. the 100-year flood, when bridge materials are glulam, concrete or steel (i.e. permanent) or logs if specified;
2. the 50 year flood for log bridges over major tributaries;
3. for all other tributaries pass the 25 year flood;
4. minimum clearance to be 1 metre above design high water;
5. satisfy site specific constraints to limit scour, siltation and erosion and minimize debris build-up; and,
6. satisfy timing constraints for construction.

All bridges shall be maintained commensurate with use. They shall be regularly inspected to determine load capacity rating. The determined capacity rating, if less than the maximum loads expected, shall be posted.

Ministry drawings for "Typical Log Bridge Type A or Type B are available from Forest District Offices. Drawing numbers are 129 P18 1-1 or 4-23 8- 1 of 1.

B. Culverts

1. Select culverts with enough capacity to pass the 50-year flood on main roads and the 25-year flood on the other roads at HW/D=1.0. Install metal culverts in accordance with manufacturer's specifications. Culvert installations for flows over 6 m^3/sec or sizes over 1800 mm in diameter must be *structurally* designed.
2. Install culverts as required to ensure the natural drainage pattern of all continuous and seasonal streams is maintained. Install additional culverts as necessary to drain ditches and minimize ditch erosion. Provide temporary culverts or cross drains (fords) as required during the pioneering stage, where siltation or erosion will have adverse impacts on other resources and on the stability of the road.
3. Install metal, plastic or cedar culverts on roads which will be used for log hauling for more than 10 years unless otherwise approved by ________. Other wood species may be permitted on shorter term roads.
4. When designing ditches and cross-drains, consider gradient, alignment, required flow capacity, site exposure, cut slope height and steepness, soil erodibility and the location of the outflow. Skew cross drains to the road's centerline three degrees for every one per cent of road grade over three per cent (i.e. road grade is 16 per cent, culvert is (16-3)* 3 = 39 degrees. Install ditch blocks as required.
5. Position culverts on the line and grade of the original channel if feasible and minimize disturbances to the stream banks.
6. The depth of fill over metal or plastic culverts is the greater of 300 mm or one-half the pipe diameter.
7. Minimum culvert sizes: 500 mm in diameter for pipes; and 1 m * 0.5 m for logs unless otherwise approved by _________.
8. Fords may be installed where approved by _________ and require the same considerations mentioned in IV.B.4.
9. Provide adequate drainage at all road junctions.
10. Replace or protect unstable fill at culvert outlets with a non-erodible material. Protect inlets as required.

Adopt as part of the regular maintenance program, the inspection and maintenance of drainage structures both seasonally and/or annually, particularly during and after major storms and at the completion of yarding and loading operations.

V. Special provisions for the maintenance of water quality

A. Where it is necessary and feasible, install cross-drain culverts to divert ditch water away from sensitive areas. Otherwise, catchment basins may have to be constructed and maintained to ensure water quality.

B. Plan borrow pits and waste areas to minimize erosion.

C. Do not dump or spill material, including road excavation material, in any body of water unless such material forms the base for the subgrade and is approved by ________.

D. Suspend any road building operation causing damage through erosion or siltation, especially during periods of intensive rainfall or heavy run off or when soils are saturated.

E. For excavator construction on easy slopes, increase the cleared width to provide for spreading of unusable material. Such material is to be spread to keep depths minimal and must be suitably placed and protected to minimize erosion.

F. When forest operations are finished, or annually, if necessary, either maintain roads and drainage structures to ensure they are environmentally safe or deactivate them by removing culverts and temporary bridges and construct water bars such that the drainage pattern is maintained. Refer to Part VIII.

G. Special construction techniques and use of special excavating equipment is required on a site-specific basis. For example, excavators are to be used for poorly drained soils.

H. Maintain the road to prevent accelerated erosion and water quality degradation. Crown or slope roads to prevent the accumulation of surface water. Remove all berms unless they are designed for a specific purpose. Provide swales or waterbars to drain road-surface water emanating from snowbanks resulting from snowplowing operations.

I. Keep culvert and bridge sites clean during and after construction.

VI. Special provisions for protection of fish-bearing waters

A. Obtain the approval of ___________ for the location, timing and method of construction of all structures proposed over fish-bearing streams.

B. Protect the shorelines and shoreline shrubs of oceans, lakes and streams from damage due to road right-of-way activities (clearing, road construction, logging and burning), as specified by _________.

VII. Skid roads and back spar trails

A. Back spar trails

1. Such roads or trails are to be marked on the ground and require approval from ________ prior to construction.
2. Locate, construct, maintain and rehabilitate such roads and trails to minimize erosion, siltation and site damage.
3. Construction and use of such roads is limited to drier parts of the year, or when suitable protection measures are incorporated to minimize site damage (i.e. ballasting with rock, slash, corduroy, etc.).
4. All continuous and seasonal streams are to have drainage structures as approved by ________. They may be culverts or fords designed to pass the maximum anticipated flood. Culverts are to be removed upon annual and/or final cessation of logging and the channel restored to its original nature. Cross-drains, either culverts or fords, are to be installed as necessary.
5. Creek crossings are to be located at approximate right angles to the flow and are to be treated to prevent sediment from entering into their waters.
6. Such roads shall be outsloped unless directed otherwise by __________.
7. All phases of construction are to be completed concurrently unless otherwise approved by ___________ and authorized by __________.
9. Rehabilitation measures for such roads will be determined by, approved by __________ and completed in advance of equipment leaving the site. These measures may include replacement of excavated material, ripping, tilling, other decompaction measures, and the establishment of vegetation, ditching, or other methods as deemed necessary.

B. Skid roads

All of A. and:

1. Skid roads are to be located across slopes rather than directly up or down the slope.
2. Skidders are not to be operated under weather or soil moisture conditions which will degrade the site or adversely affect other resources.

VIII. Deactivation of roads, skid trails and back spar roads

A. All roads no longer required for logging or other uses shall be deactivated, rehabilitated or put back into production utilizing techniques described below, or others as deemed necessary or prescribed by _________ who will identify which measures are to be undertaken annually.

B. Planning requirements

1. Each area proposed for development shall have an access map clearly showing the roads to be:
   a. left open for hauling or two-wheel drive access;
   b. left open for four-wheel drive access;
   c. closed temporarily;
   d. closed permanently.
2. Planned deactivation work is to be shown as marked in the field on the approved cutting permit (logging) map and submitted to the ________ two months prior to the planned end of harvesting activities and indicate:
   a. location of bridges and culverts to be removed;
   b. location of all waterbars;
   c. location of other remedial works and a brief description of such work;
   d. proposed timing of planned works.
3. Regardless of the end use of the road, the above plan, along with the planned deactivation work, must be approved by the _______ prior to undertaking the work. The _______ will prescribe deactivation work if none is proposed by the Licencee (Permittee).

Failure to comply with the approved deactivation plan will result in the Forest Service doing the work at the Permittee's expense.

The following can be used as a guideline by personnel having knowledge of the area to be deactivated and have demonstrated *experience in deactivation-rehabilitation work* ________.

C. Waterbar guidelines

The intent is to space water bars to limit the amount of water or velocity build-up and minimize erosion. Ideally, ditch or road surface water is to be either directed back into its natural drainage pattern or gullies, or it is to be dispersed as quickly as is practical. Avoid directing water onto unstable or erodible fills or towards other sensitive sites.

1. mark water bar locations in the field with ribbons on both the cut and fill side of the road;
2. number or letter the ribbons in an orderly fashion;
3. show location of ribbons on the cutting permit map;
4. include notes outlining other required work at or between the ribbons (i.e. insloping, outsloping, berms, etc.)
5. date and sign the plan and submit to the __________ for review and approval (at least 60 days prior to the end of the planned use of the road).

The following table can be used as a spacing guide but must be modified to suit other parametres as found on each individual road section.

D. Water bars are to be constructed in accordance with the specifications shown on Sketches 1, 2 and 3. The following Water bar Spacing Tables are to be used as a general guide for their spacing.

E. Unless otherwise instructed by the __________, all bridges and culverts shall be removed in accordance with Sketches 4, 5 and 6.

F. Although outsloping is most effective for contour roads, it can be used for any road in conjunction with waterbars and/or swales. See Sketch 7.

G. Insloping is used to keep road and ditch water away from the fill side of the road. See Sketch 8.

H. Berms may be required to keep water away from the fill side of the road or can be used to direct water towards a desired location. See Sketch 9.

I. In some situations, the road or trail may require the following measures to either reduce instability or erosion problems or to put the area back in production.

1. excavating the fill back onto the road bed;
2. ripping or tilling to reduce compaction;
3. re-vegetating.

Such measures will be prescribed on a site-specific basis by the _________ and form part of the deactivation plan.

J. Roads to be left open for two-or four-wheel drive must be maintained.

Water bar spacing guide for roads and skid and back spar trails in metres

Soil Type / Road Gradient	Silts and Fine Sands	Coarse Sands and Cohesive Clays	Gravels and Rock Ballast
0-5	100	160	210
6-10	80	110	160
11-15	50	90	130
16+	Site Specific		

This spacing must be modified for slope position and side slope steepness as follows:

Correction Factors

Slope Position	Sideslope (%)				
	0-20	21-40	41-60	61-80	81+
Upper Slope	1.0	0.8	0.7	0.6	0.5
Middle Slope	0.8	0.7	0.6	0.5	0.4
Lower Slope	0.7	0.6	0.5	0.4	0.3

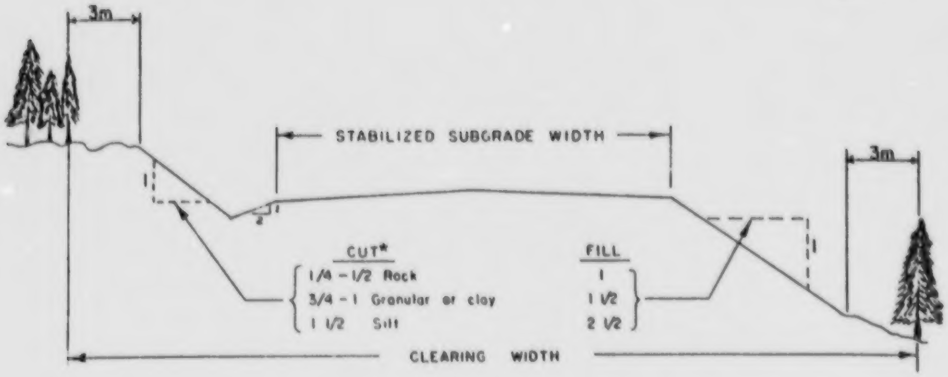
Notes:

A. To use the tables:
1. Divide road into sections of similar grades, soil types and slope.
2. Measure the average road gradient in per cent.
3. Visually estimate the soil type in the ditch and on the road surface. Choose the spacing required for the most erodible soil if ditch and road surfacing material differ. Erodibility generally decreases thusly:
   Silt — Fine Sand — Sand — Clay — Gravel — Cemented Material Coarse Gravel.
4. Choose the slope position.
5. Measure the average sideslope for the road section.
6. Choose the basic spacing from the road gradient and soil type and multiply it by the appropriate correction factor.
   Example: Silt soil, road gradient 15 per cent; side slope 60 per cent, middle slope. Water bar spacing should be about 50 * .6 = 30 m. This can be considered the maximum spacing.

B. Soils are identified by visual estimate and are classified to the higher percentage of the grain size present. If a soil is estimated to contain 20 per cent silts and sands and 80 per cent rock ballast, then use the spacing for gravels and rock ballast.
Examine the downslope on which the water bar will disperse water. If extensive erosion will occur, change the location to suit the situation or provide suitable protection. It is better to have several small waterbars rather than a few large ones.

C. It is often possible to deactivate a road and still have two-wheel or four-wheel drive access.

Figure 1: Roadway construction



STANDARD DIMENSIONS IN METRES

Road Class	Stabilized	Ditch depth	Clearing width
Class 1	10	1.0	35
Class 2	9	1.0	30
Class 3	8	1.0	30
Class 4	6	0.7	25
Class 5	5	0.5	20 **
Class 6	4	0.3	20

** Maximum width of road permitted unless otherwise approved by ____________.

Local variations in the standard road dimensions are frequently required because of the following circumstances:

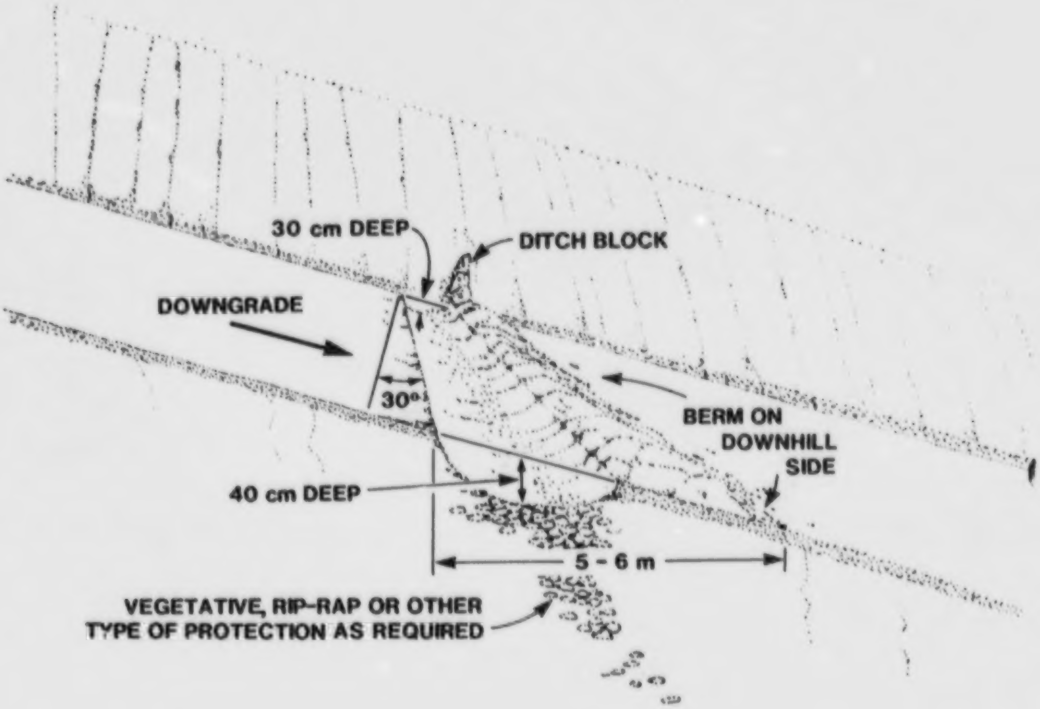
a) Clearing width - may be increased or decreased to suit local conditions or particular requirements.

b) Subgrade width - may be increased for turnouts and widenings or decreased in rock cuts.

c) Ditch depth - may be increased to facilitate adequate ditch gradients, or for drainage of unusually wet soil. Depth may be decreased in rock or hardpan sections. In flat country, scraper ditches approximately 4 m wide may be constructed to obtain material for raising the subgrade above the general ground level.

*d) Cut slopes may be increased or decreased to suit soil types and the type of road being constructed (permanent or temporary).

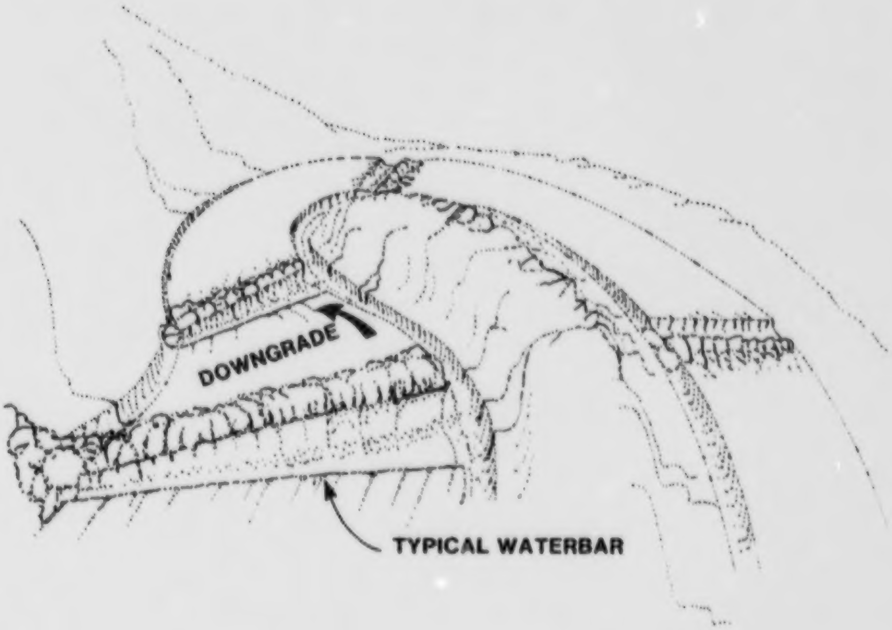
Sketch 1: Typical waterbar


30 cm DEEP
DITCH BLOCK
DOWNGRADE
30°
BERM ON DOWNHILL SIDE
40 cm DEEP
5 - 6 m
VEGETATIVE, RIP-RAP OR OTHER TYPE OF PROTECTION AS REQUIRED

Notes

- angle 30 degrees as shown.
- ditch block.
- berm on downhill side.
- vegetative or rip-rap protection at outflow.
- driveable with 2WD.
- inlet about 1 metre wide; outlet about 3 m wide (as measured on the inside of the waterbar).
- can be constructed by hand, grader, bulldozer, backhoe or other equipment with a blade or backhoe.
- compact the berm to facilitate vehicle passage.

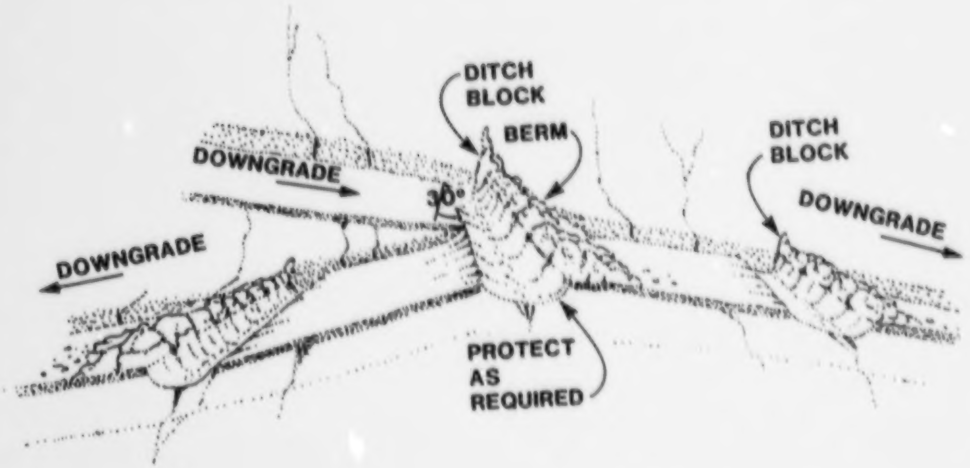
Sketch 2: Waterbarring thru-cuts & switchbacks



Notes

- can be one of the worst erosion potentials.
- place waterbar before the start of the thru-cut if feasible.
- place waterbar where thru-cut ends if feasible.
- it may be necessary to waterbar within the thru-cut because of difficulties to maintain ditches.
- crown, inslope or outslope, to keep water in the ditches.

Sketch 3: Waterbarring road junctions


DITCH BLOCK
BERM
DITCH BLOCK
DOWNGRADE
30°
DOWNGRADE
DOWNGRADE
PROTECT AS REQUIRED

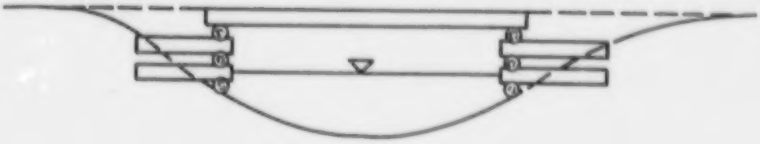
Notes

- dimensions the same as for typical waterbar.
- can be driveable.
- ditch block.

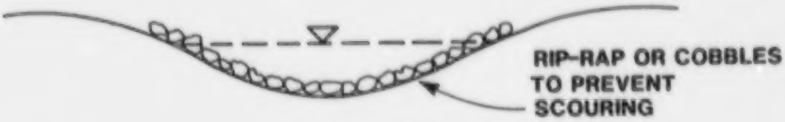
There are several combinations of junctions, each requiring their own drainage solution. Always consider ditching, ditch blocks, skewing, depth, spacing of bars and outflow protection needs.

Sketch 4: Removal of bridges

Either remove and block the road or construct a ford.



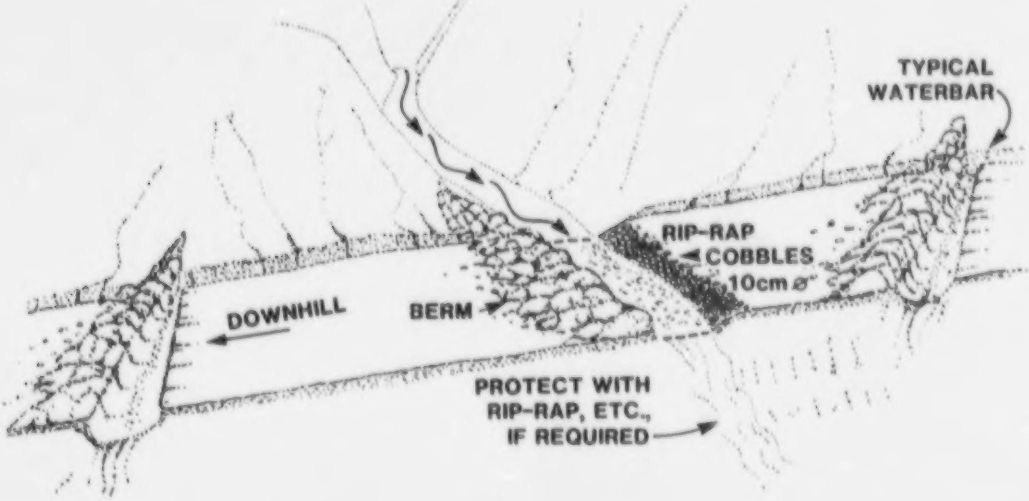
Remove stringers and crib logs and excavate back to original ground line, or leave crib logs in place and construct a by-pass.



Notes

- if required for 2WD or 4WD, slope into and out of creek must be gentle enough (less than 30%) to allow passage of vehicle.
- only certain sites are suitable for this solution.

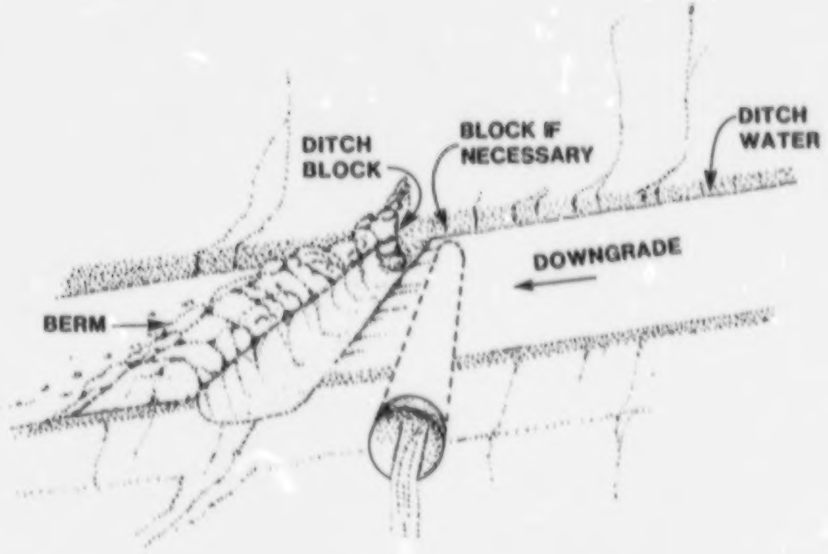
Sketch 5: Removal of culverts for small streams (seasonal or continuous) and gullies


TYPICAL WATERBAR
RIP-RAP
COBBLES
10cm ø
DOWNHILL
BERM
PROTECT WITH RIP-RAP, ETC., IF REQUIRED

Notes

- rip-rap in creek channel to minimize erosion.
- can be constructed to allow 2WD and 4WD traffic.
- place waterbar above to avoid carrying sediment into ford.
- place berm large enough to protect against water jumping the bank and running down the road.

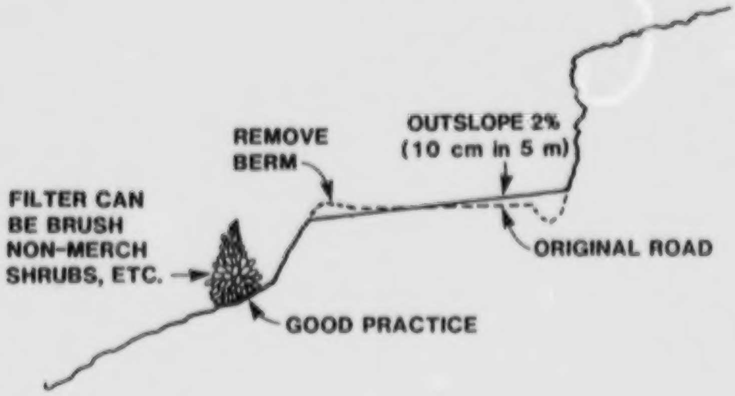
Sketch 6: Removal of culverts used for road and ditch water


DITCH BLOCK
BLOCK IF NECESSARY
DITCH WATER
DOWNGRADE
BERM

Notes

- culvert can be left in place if road will be used again in two years or less. Otherwise remove it and construct a typical waterbar.
- usually leave culvert working and place a waterbar downgrade to guard against culvert plugging.
- remember to block the culvert if necessary.
- construct typical waterbars as necessary.

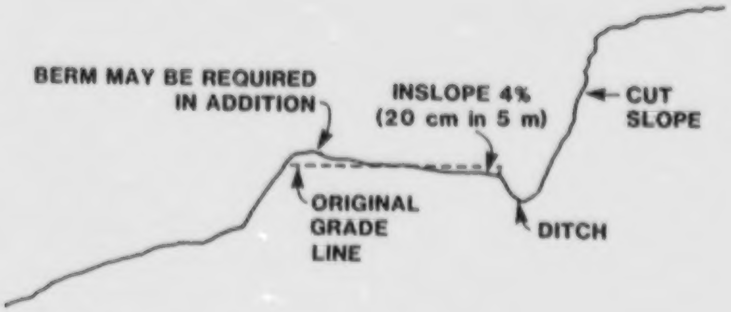
Sketch 7: Outsloping


REMOVE BERM
OUTSLOPE 2% (10 cm in 5 m)
FILTER CAN BE BRUSH NON-MERCH SHRUBS, ETC.
ORIGINAL ROAD
GOOD PRACTICE

Notes

- good for contour roads having gradients of less than 5% and ground slope less than 20%, and for roads having no ditches, or ditches subject to plugging.
- waterbars still required.
- if the road is left open for use, then outslope should be increased to 4% (i.e. 20 cm in 5 m).

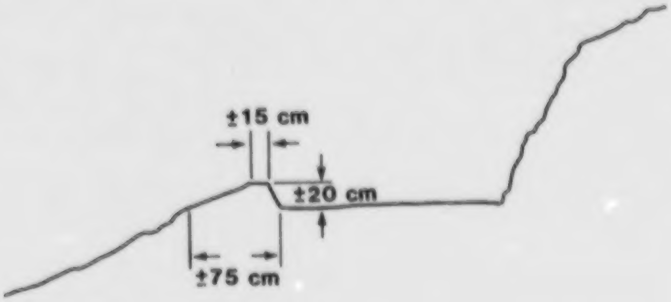
Sketch 8: Insloping


BERM MAY BE REQUIRED
IN ADDITION
INSLOPE 4%
(20 cm in 5 m)
CUT
SLOPE
ORIGINAL
GRADE
LINE
DITCH

Notes

- used to keep water away from unstable fill slopes.
- ditch and cut slope must be stable.
- used for short sections of road.

Sketch 9: Berms



Notes

- used to keep water away from unstable fills.
- must provide break in the berm at non-problem areas to let water off.
- berms may require removal upon deactivation of the road.
- can be used in conjunction with insloping.

INTERIM
FOREST LANDSCAPE MANAGEMENT GUIDELINES

FOR THE VANCOUVER FOREST REGION

MAY 11, 1990

**Province of
British Columbia
Ministry
of Forests**

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1.0 Introduction

Landscape forestry is an essential component of integrated resource management in visually sensitive areas. The *Forest Landscape Management* (FLM) *Policy* (II - Rec - 003) is fully endorsed in the Vancouver Forest Region and shall be fully implemented and monitored.

In addition to confirming the importance of the landscape forestry mandate, the objectives of these guidelines are: to explain and confirm responsibilities for each phase of the landscape process, provide guidance in the implications of Visual Quality Objectives on harvesting extent, provide guidance on the effect of slope and average growth rates on visually effective green-up, and encourage participation in training sessions available throughout the province.

General responsibilities are outlined in the FLM policy noted above. The basic approach to landscape forestry is presented in the *Forest Landscape Handbook* (FLH). The new *Chapter II of the Recreation Manual* describes the processes and procedures in current use which have evolved from over a decade of program development..

2.0 Forest service and licensee responsibilities

Clarification of responsibilities is made in this section for each phase of the landscape process from inventory and analysis to setting objectives, design, implementation, and monitoring.

2.1 Recreation inventory and landscape inventory

The broadest level of visual resource identification is the *Recreation Resource Inventory* which depicts visually sensitive landscapes as "visual - features" (V-features) and gives guidance to their management. (Recreation Manual, Appendix). Completion of Recreation Inventory is a current requirement of Tree Farm Licence Management and Working Plans (Forest Act. Sec. 28 (d) (i), and a Forest Service responsibility on other Crown forest lands.

Landscape Inventory is considered to be an extension and refinement of the Recreation Inventory "visual features"identification. Therefore, the *same* responsibilities apply to Landscape Inventory as to Recreation Inventory. Ultimately, it is intended that the two approaches to visual resource identification will be merged as a single Recreation Inventory for G.I.S. processing once the digital topographic database (T.R.I.M.) becomes available.

The District Resource Officer Recreation (DROR) prepares the TSA inventories, and monitors the quality and content of TFL inventories. The Regional Landscape Forester (RLF) audits all new and updated inventories. Recreation and Landscape Inventories have been conducted in many corridors. Updating and refinement may be a current necessity.

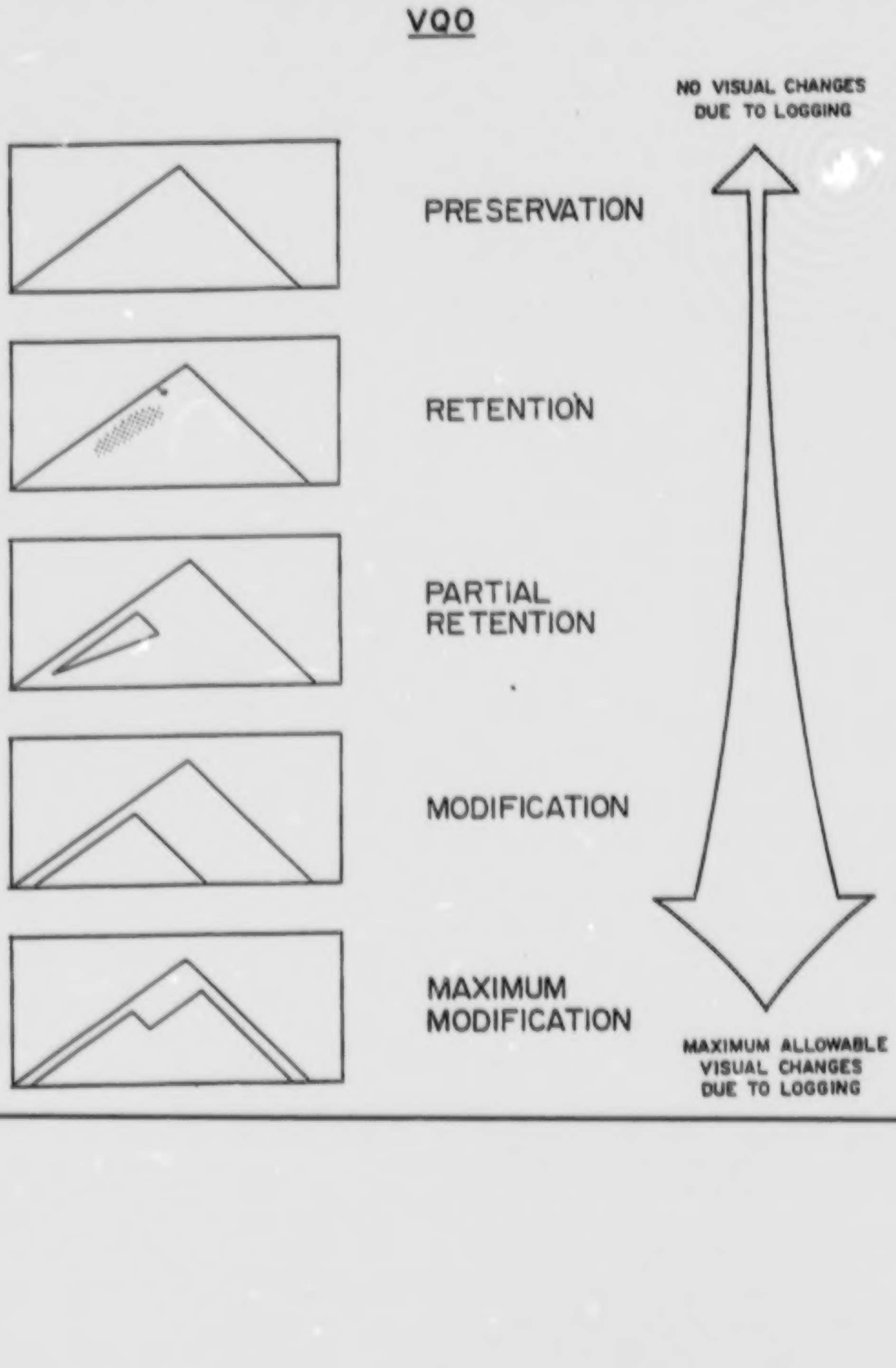
2.2 Selection of recommended Visual Quality Objectives (VQO'S)

Recommended *Broad* VQO's (Figure I) are selected for major landscape units by the licensee within TGL's and the DROR within Timber Supply Areas (TSA). In general, Broad VQO's within main travel routes, coastal shorezones, and other key sensitive areas warrant a reasonably restrictive VQO (e.g. Partial Retention to retention) to meet average public expectations for scenic and recreational enjoyment. Such restrictions may influence the location, extent and scheduling of forest operations but does not, in general, preclude operations.

Licensee recommended broad Visual Quality Objectives will be reviewed by the DROR, in consultation with the RLF. Once adequate, VQO's will be submitted for District Manager approval which then may required adjustment to achieve the proper balance and integration of all resource values (e.g. fish, wildlife, water, tourism, and timber) (Figure 2).

Detailed VQO's selected at the Development plan stage may, on occasion, vary from the broad VQO to allow for required operational flexibility, and for the variability in forest accessibility and values. A period of time will be allowed to achieve the designed VQO in such circumstances, provided the broad VQO is maintained for the greatest extent of the landscape unit (see Recreation Manual , Chapter 11).

Figure 1: **Spectrum of visual changes allowed by VQO**


VQO
NO VISUAL CHANGES DUE TO LOGGING
PRESERVATION
RETENTION
PARTIAL RETENTION
MODIFICATION
MAXIMUM MODIFICATION
MAXIMUM ALLOWABLE VISUAL CHANGES DUE TO LOGGING

The RLF will participate in setting and/or reviewing all recommended broad VQO's set by the District in TSA's, and will conduct periodic audits of their successful implementation. encouraged to develop familiarity with procedures and to ensure consistency in approach.

See Appendix for Definitions and Management Implications of VQO's.

2.3 Landscape sensitivity identification in five-year development plans

All major forest licensees (TSA/TFL) are responsible for determining landscape sensitivity for inclusion in Five-Year Development Plan submissions (Vancouver Forest Region Five-Year Development Plan Guide, September, 1988). This requirement applies to all landscapes of aesthetic importance such as primary travel corridors (highways and waterways), areas of recreational.or visual attraction, near population centres, and other areas as determined by the Forest District.

The sensitivity of specific landscapes required for TSA/TFL development plan approvals can be determined from existing Landscape Inventory. Alternatively, the Recreation Inventory may offer sufficiently detailed information if it has utilized "Visual-feature" subscripts to record landscape sensitivity.

In the absence of an overall landscape inventory or sufficiently detailed Recreation Inventory "Visual-features" mapping, landscape sensitivity must be determined *by the licensee* for all operations proposed within visually sensitive units. Costs of providing such information are considered a part of *normal* overhead calculated in the Appraisal Allowance (Coast Appraisal Manual, Sec. 4.6.1).

Note: examination of the whole landscape unit (drainage, corridor segment) assists in the identification of broad to specific landscape values that may influence the development plan, such as existing intensity and pattern of development, key focal points, relative significance, and unique landscape features, and provides data for total chance planning.

2.4 Landscape analysis and design in development plans

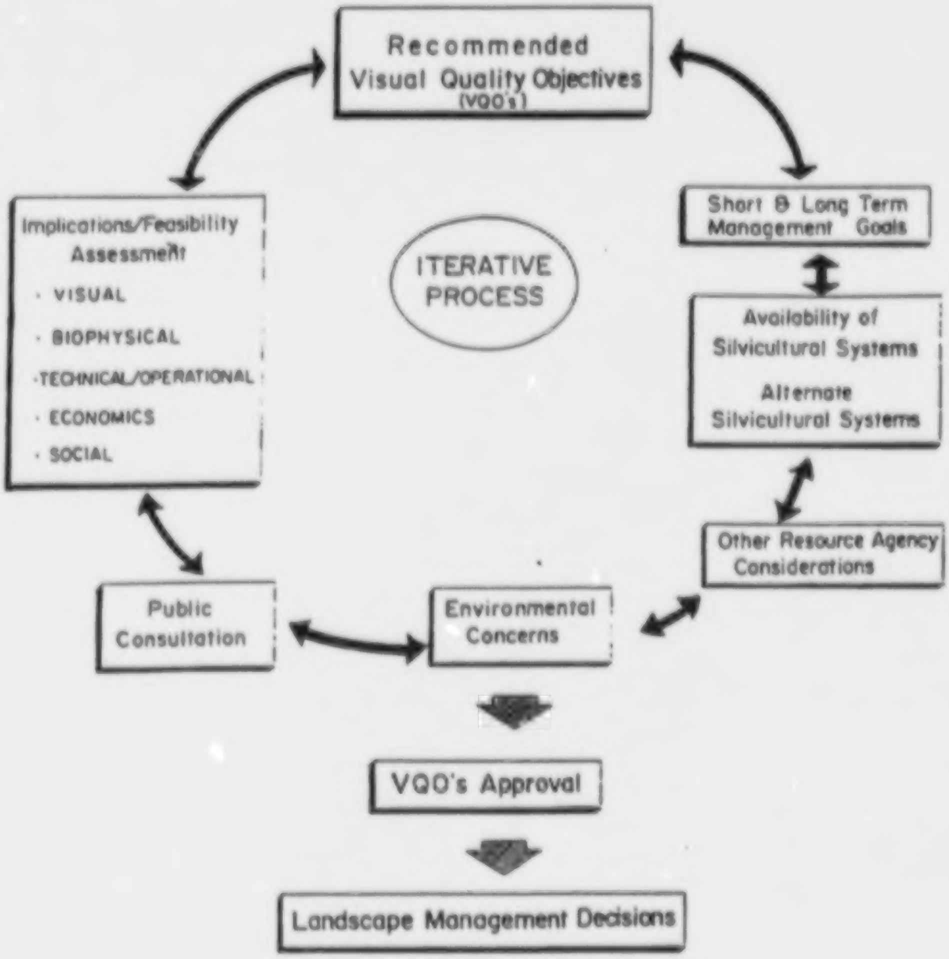
To ensure visual values are adequately addressed, and to encourage timely and effective plan development and approvals, *all* TSA/TFL Five-year Development Plans in areas of known landscape sensitivity, and in areas identified additionally by the Ministry of Forests, *must* now include landscape analysis for the selection of recommended Visual Quality Objective(s) and the course of action to be taken to achieve them. The format for analysis is presented in the new Chapter 11 of the Recreation Manual.

2.5 Presentation of visual information

The following methods are to be used for public presentation of development plans within visually sensitive landscapes, and must accompany their submission for approval:

1. In very low profile areas, a comment is required that the area is not viewed by the public from any significant vantage point. While main travel routes may not provide exposure, secondary routes such as trails may bring recreational observation and thus may have an influence on the sensitivity. Comment on this aspect is also require.
2. In slightly more-visible areas, simple photography taken from one or more likely vantage points is required with the proposed opening(s) outlined on the photo or on a clear acetate overlay. Adjacent areas which may influence the subject opening should be included. Aerial photography is useful in determining the location of the blocks.
3. In high visibility areas, a digital terrain model plot, photomontage or computer simulation-video imagery, with proposed alterations accurately portrayed in the context of the existing visual condition, will be required. The total-chance approach may be advantageous, and therefore encouraged where appropriate, for portrayal of development and impact mitigation over time. As there may be numerous observer positions and viewing distances for any project, several of the most obvious (logical) viewing locations are to be assessed. Views should be identified as to viewing opportunity (e.g. focal, long term,glimpse, etc).

Figure 2: **Landscape Management Decisions & Approval of Visual Quality Objectives**


Recommended Visual Quality Objectives (VQO's)
Short & Long Term Management Goals
Availability of Silvicultural Systems
Alternate Silvicultural Systems
Other Resource Agency Considerations
Environmental Concerns
Public Consultation
Implications/Feasibility Assessment
· VISUAL
· BIOPHYSICAL
·TECHNICAL/OPERATIONAL
· ECONOMICS
· SOCIAL
ITERATIVE PROCESS
VQO's Approval
Landscape Management Decisions

4. A written report is to accompany each evaluation. Depending on sensitivity, the report will range in length from a single sentence to a more substantial description of the variables involved and the actions required to meet the VQO's.

2.6 Pre-harvest silviculture prescriptions (PHSP)

The PHSP landscape analysis is the final opportunity to step outside the forest stand and determine the visual result of the planned layout, and the final opportunity to make adjustments when such would be necessary for integration with the landscape as well as with other resources.

Forest practices are required to meet District Manager-approved Visual Quality Objectives which will reflect an *integrated* management approach for all resources. Whether VQO's have been set or not, the Pre-Harvest Silviculture Prescription is to be used to identify the Landscape Sensitivity, and the likely visual quality condition that will be achieved by the plan as well as the actions that will be undertaken, as applicable, to meet the recommended or approved Visual Quality Objectives. Supplemental landscape analysis information should be appended to the PHSP form in support of the PHSP decision.

2.7 District referrals and monitoring end results

Referrals of Five-year Development plans and related PHSP's for landscape considerations are, by FLM policy, primarily the responsibility of the District Resource Officer, Recreation. As the visual landscape is but one of the resources requiring integrated management, review is, by necessity a team approach. Plan reviews and monitoring of their successful implementation shall occur on an on-going or "as necessary" basis. The success of each plan's achievement of approved Visual Quality Objectives shall be audited by the RLF.

2.8 Training and extension

District Resource Officers Recreation and the Regional Landscape Forester will jointly provide advice and assistance in the interpretation and application of these guidelines. Landscape training is available on request in each Forest District and is coordinated by the Regional Landscape Forester.

3.0 Limits of harvesting to meet visual quality objectives

Viewing distance, zone and slope of the landform are critical factors when determining appropriate harvest patterns and and opening sizes. Background views of large landforms or close views of landscapes with flatter topography may tolerate larger block sizes (individually and combined over time). Close-in views which focus on steep foreground landforms may support only very small openings before the landform is dominated. The angle of view, as it intersects with the slope of the landform, intervening topography and the height and density of vegetative screening, will also have strong influences on the perceived extent of alteration. Achievement of visually effective green-up (VEG)* is also an important factor in balancing the degree of recent alteration in the landscape. Distinctions in height, color and texture will remain, in comparison with the adjacent forest, but will not be perceived as "recent cut-over".

Areas are generally considered to have achieved VEG when, viewed in any season from the typical land or water based locations, stumps, slash, and open ground are no longer clearly visible. VEG implies that regeneration heights, crown closure, and stocking are sufficient to provide an appropriate degree of visual cover, colour,and texture. In low public use areas, or in areas of high snow levels in which winter use is minor, seasonal variation in VEG may be accepted.

Herbaceous growth will also reduce visual impacts, but such effects are limited to the summer season. Herbaceous cover may be considered effective green-up for corridors in which summer use is predominant. Dependence on herbaceous growth should be limited as it is seasonal and usually subject to silvicultural treatments.

---

* Visually Effective Green-up (VEG) is the stage of reforestation in which the renewed forest cover. clearly perceivable to the average forest visitor.

3.1 Degree of acceptable landscape alteration

Figure 3 provides the approximate limits of alteration for each VQO as seen *in perspective view* from commonly accessed viewpoints, averaged where necessary and appropriate. The values represent the proportion of landscape permitted to be in a visually altered state *at any one time* without supporting *visually effective green-up*, assuming appropriate sizes, shapes and distribution of openings.

Figure 4 illustrates the effect of distance zone on effect of opening size in the view.

3.2 Visually effective green-up and the influence of slope

Figure 5 indicates the influence of slope and time required to achieve visually effective green-up based on average growth performance in the Vancouver Forest Region.

4.0 Forest management guidelines and landscape design[1]

VQO's establish *what* FLM objectives are to be met but do not specify *how* they are to be met. Landscape design is the process whereby approved VQO's are translated into "on the ground" plans for road construction, harvesting and silviculture prescriptions and post-treatment options.

There is some flexibility available in designing forest management practices to meet the performance criteria of specific VQO's. This flexibility is important because visual quality is only one component of the spectrum of resource values and environmental concerns that must be accounted for in the integrated resource planning and management process.

Landscape design and related guidelines must be a part of approved development plans and be reflected appropriately in Pre-harvest Silvicultural Prescriptions and cutting permit applications.

The components of landscape design are outlined in Figure 6 and includes the range of factors to consider in designing forest development plans and specific recommended practices. These factors also form the basis for the following guidelines.

4.1 Guidelines for reduction of contrast in vegetative cover

A) Road location and right-of-way clearing

- Where possible, locate roads on benches, avoid unstable areas and side casting of excess material on sensitive slopes.
- Maintain minimum right-of-way clearing widths in visually sensitive areas ("minimum" may have to be defined in a Standard Operating Procedure).

B) Clearcut size, shape, and location

- Apparent size (as seen from viewpoints) is the critical measure when designing the size of an alteration. The relationship between size in plan and size "as viewed" or in perspective depends on screening, topography, viewing angle, and viewing distance.
- Shape should be determined by analysis of other dominant lines or forms in the landscape such as natural openings, timber-type differences, or overall landforms; the goal being to repeat these naturally occurring elements.
- In planning the location of a particular cut block or series of cut blocks, it is important to consider balance between visible and non-visible or higher and lower sensitivity areas. Concentrating early harvest in non-visible or low sensitivity areas simply postpones the problem until the next pass and results in excessive harvesting pressure on sensitive sites.

---

[1] Adapted from Prince George Forest Region Landscape Guidelines, 1990.

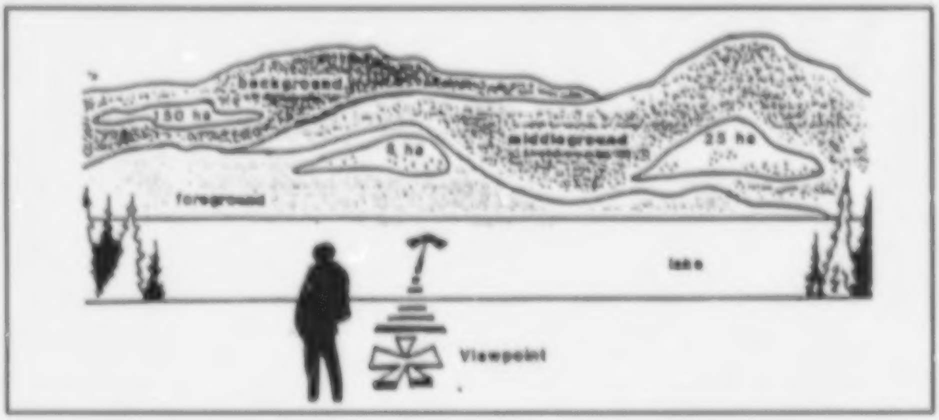
Figure 3: Limits of landscape alteration in perspective view

Visual quality objective	Per cent of viewshed altered* without visually effective green-up (non-VEG)
Preservation (no activity)	0
Retention (activity not visually evident)	0-5
Partial Retention (Activity Subordinate in landscape	6-15
Modification (Activity may dominate, borrows line and form)	16-30
Maximum Modification (Activity dominates, may be out of scale)	31-50
Excessive Modification (activity does not relate at all to landscape)	50+

* Default guidelines are applicable in the absence of detailed information on visual absorption capability (VAC) and growth performance to support more refined landscape decision.s. The factors influencing the limits such as slope, tree height, viewing opportunity are to be addressed in each specific plan.

These default guidelines shall be implemented unless specific analysis and design can support suitable alternatives. Silviculture system and harvest design(shape, size, dispursion, screening) in relation to VAC will have significant influence on the limits to alteration. Road impacts are separate considerations.

Figure 4: **Landform breakdown illustrating partial retention VQO 5-15% landform alteration**


background
150 ha
5 ha
middleground
25 ha
foreground
lake
Viewpoint

Note: Relative scale of each cut block proportional to landform while increasing greatly in size.

(*adapted from MOF Prince Rupert Region, 1989)

Figure 5: **Visually effective green-up (VEG) period by slope class and height***

Slope class (%)	Height* of required regeneration (metres)	VEG Period* (years)
0-30	2-3 m	7
30-60	3-4 m	9
60+	4-5 m	11

* These default guidelines are to be implemented in the absence of detailed information on growth performance to support landscape decisions or other resource constraints. Achievement of visually effective green-up is influenced by visual absorption capability (VAC) factors such as topography, growing conditions, viewing conditions, and by silvicultural system. The rate of initial green-up can be hastened in sensitive areas by use of larger stock and/or closer planting.

Figure 6: Components of landscape design

MANIPULATION OF FOREST COVER

- Logging systems
- Clearcut block location, shape and size
- Edge treatments of opening
- Partial canopy removal
- Stand tending treatments
- Rate of regeneration
- Leave strips and screens
- Residuals and leave trees
- Road location and rights-of-way cleaning

MANIPULATION OF GROUND SURFACE

- Road construction standards
- Road and skid trail construction practices
- Logging system site disturbances
- Soil mass movement
- Post-harvest rehabilitation
- Site preparation
- Slash treatment
- General site cleanliness

DISTRIBUTION OF ACTIVITIES OVER TIME AND SPACE

- Season of logging
- Pattern of activities (spatial distribution)
- Balancing of harvesting between visible and non visible areas
- Availability of timber for each pass
- Timing between passes
- Timing between passes

VISUAL SIMULATIONS

- Graphic techniques
- Computer simulations
- Video mapping

PUBLIC ACCEPTABILITY OF LANDSCAPE ALTERATION

- Informal feedback
- Public presentations
- Solicited comments
- Public participation on planning teams

C) Edge treatments of openings

- In some situations, the creation of a "feathered edge" on clearcut blocks may be a useful design option. The stand in question must be multi-layered in order to contain the gradation of tree sized necessary to create this effect. Undulating boundaries may also be useful if such a technique would result in more natural appearing openings. Forest protection concerns must be weighed against visual design options. The "feathered edge" approach is likely to reduce windthrow hazard in spruce-balsam stands and should be considered for use on this basis. The creation of sharp points of timber should be avoided, particularly for protection reasons.
- Snags created by escaped fire (fringe damage) should be knocked down and/or salvaged.

D) Residuals and leave trees

- Deciduous or residual trees and other vegetation left in clumps or in sufficient density will help to reduce color and texture contrasts.
- Damage, leaned trees, or poor quality residuals and snags should be knocked down to avoid a scruffy appearance for a suggested distance of 250 m from a highway, pull out, etc. Beyond this distance, snags can be left standing for wildlife purposes, if not a hazard.
- Avoid damage to residual trees.

E) Orientation of openings and windfirmness of edges

- Openings which parallel the terrain contour on their long-side tend to create less visual contrast, however, the prevailing wind direction should be considered in making final design decisions, in order to avoid blowdown.
- Location of windfirm boundaries is critical in the design of cut blocks.
- Residual trees should be left in wind-firm groups rather than as isolated trees.

F) Partial canopy removal

- Silvicultural systems which result in partial canopy removal are useful, and in some instances required, to meet restrictive VQO's on visually sensitive slopes. There are some differences between partial cutting systems which influence visual results. For example, an even-aged shelterwood management strategy will result in little visual contrast through the first series of cuts, however, the final removal cut will dramatically lower the canopy in a manner similar to clearcutting. The critical difference between this system and clearcutting will be the presence of significant advanced regeneration which will reduce visual impact by decreasing the contrast in color and texture. Single-tree selection which results in uneven-aged management will result in a relatively constant canopy height and crown closure over time and thus reduce visual contrast to a minimum.

G) Stand tending treatments

- Brushing and weeding, conifer release, juvenile spacing and other stand tending treatments can influence the lever of color contrast and texture on young forest stands. These impacts should be considered in landscape design strategy.
- The above is particularly important on roadside openings where the public may have watched the area "green-up". Interpretive signing may reduce potential public concern.
- Minimize stumps heights, especially in the foreground (0-1 km).

H) Rate of regeneration

- Early planting, use of jumbo planting stock and/or close spacing can be used to speed green-up and reduce visual contrast.

I) Vegetative screens

- Harvest of areas providing screening, in particular, roadside and shorezone stands, should be coordinated with the harvest of those areas that are screened from view. Careful roadside harvesting can open up scenic views, however, it can also focus attention on specific areas and thereby increase their sensitivity levels. A strategy must be developed to manage roadside stands to minimize adverse visual impact and ensure that approved VQO's can be met. The rate of regeneration should be optimized to re-establish screening.

- Leave strips (partial or total) adjacent to a highway can be used as temporary screens. However, attention should be given to wind firmness, the risk from pests and diseases, and volume of timber left for a subsequent harvesting following satisfactory green-up.

4.2 Guidelines for reduction of ground-surface contrast

The visual contrast created by ground surface disturbance such as roads, skid trails, landings, and borrow-pits can be severe and visually detrimental. When they occur in visually sensitive areas, the impact of these activities should be minimized *regardless* of the management VQO prescribed for the area being planned.

A) Road construction standards

- Road location relative to
  - highly visually sensitive areas
  - unstable slopes
  - natural or man-made openings.
- Where roads (also landings and skid trails) must cross visible areas, the cuts and fills should be minimized and grass-seeded; locating roads at or near the bottom of natural or man-made openings optimizes vegetative screening effect.
- Contour road cut and fill slopes and avoid damage to adjacent trees during road construction.
- Road surface and overall right-of-way widths should be minimized.
- Side casting should be avoided.
- Blasting of rock should be conducted in a manner which minimized damage to standing timber.
- Erosion protection measures should be incorporated which function during periods of use and non-use of the road and minimize visual contrast.

B) Borrow pits and quarries*

Borrow pits/or quarries located adjacent to major travel routes should be designed to minimize visual impact. This can be accomplished through:

- Design of operations to preserve existing screening;
- Re-establishment of screening through planting of appropriate species of trees and/or shrubs;
- Design of access roads to avoid direct views of borrow pit operations.

C) Logging system site disturbances

Minimization of visual contrast due to site disturbances caused by harvesting activities is the overall guideline to be followed in designing logging system s. Specific areas of concern are listed as follows:

- Low ground pressure, cable or aerial yarding systems should be used on sites where the risk of visible site disturbance is excessive due to slope, solid stability or other hazards. This risk roughly parallels the site degradation sensitivity classes established in the *Interim Harvesting Guidelines for the Coast*. Soil mass wasting, surface erosion and displacement are the most immediate concerns relating to visual impact, however, compaction of forest soils has the potential to reduce green-up rates which are critical to visual impact mitigation.
- Season of harvest greatly influences the potential for creation of visual contrast through site disturbance. Though not a frequent benefit on the coast, harvesting on frozen ground may be necessary under some circumstances to reduce this potential. Wet ground increases the potential.

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* *(requires development of a referral process from the Ministry of Crown Lands.)*

- Location of skid trails in high visual sensitivity areas should be avoided where possible. If skid trails must occur in these areas, then they should be pre-planned to minimize visual impact by maximizing the area served from each trail and avoiding side casting. Grass-seeding should also be considered as a short tem technique to reduce visual impact.
- Landings should be located on benches or in screened areas where feasible. Those landings which must be located in visible areas should be kept to a minimum size, located well back from a highway (suggested 250 m), sloped away from a highway, hidden by landforms, and/or grass-seeded as soon as possible after operations are completed.

D) Site preparation

Site preparation techniques such as scarification. broadcast burn or windthrow pile and burn create temporarily increased visual impacts. The longer term gains in green-up rates resulting from these practices outweigh temporary visual costs. Provisions for smoke management must be incorporated into the design of burning techniques.

- Use care in slash burning to avoid escapes, fringe damage, or excessive smoke.
- Slash disposal procedures include;
  - Clean-up slash in the foreground (0-l km) to avoid the appearance of wasteful practices (whether real or perceived).
  - Slash should be bunched or piled well back from a highway or hidden by using landform configuration if possible.

E) Post-harvest rehabilitation

- Grass-seeding of appropriate species mixes should be done to reduce visual contrasts of unavoidable soil disturbances and reduce oil erosion hazard.
- Clean-up the debris and litter associated with logging camps and equipment.

4.3 Distribution of activities over time and space

The distribution of harvesting activities through space and time is one of the most important techniques available for managing visual quality.

- Visible patterns created by harvesting activities over drainage, viewshed and individual slopes must be designed to meet management visual quality objectives. This concept is particularly applicable to the VQO's of Partial Retention and Modification.
- Consideration should be given to total chance planning of harvesting activities to ensure that visually driven design solutions have considered the economic and biophysical feasibility of future passes.
- Although landscape management objective may not impact on timber availability over the long-term, the meeting of VQO's in the short-term, may impact the rate of harvest, which also affects the number of passes and the timing between the passes.

Definitions and management implications of VQO's[1]

VQO: Preservation (P)

The Preservation VQO allows activities such as maintenance of minimal facilities (e.g. recreation sites, trails) and visual enhancement of recreation opportunities (e.g., pruning, cutting trails, danger tree removal) that enhance or protect natural wildland values. Alterations beyond this, such as timber harvesting, are not acceptable but access routes through the unit may be possible, provided they do not impact negatively on existing visual quality.

In the managed forest, Preservation may be applied to relatively small areas where landscape values are very high and outweigh other natural resource values (e.g. some land/water interfaces; special features of visual, historical, geological, biological, or educational importance and areas of value for recreation).

VQO: Retention (R)

The Retention VQO indicates that forest development activities or alterations *not* be visually apparent. With proper layout, up to 5 per cent of the landscape unit may be in an altered state at any one time.

In the managed forest, Retention is recommended for areas of high landscape value (e.g. continuously forested steep slopes facing important viewpoints) and where visual changes may be discernible but not clearly visible.

- Selective logging is required to meet this VQO on most slopes in visible areas where timber types and conditions permit. However, benches and hidden areas may be cut more intensively or clearcut (in many cases these are expected to be taken up by roads and landings). Clearcut logging must be designed to take advantage of topographic breaks and vegetative screening.
- Size and shape of selection harvesting units are not critical visually. However, the number of residual stems left after cutting is very important. Depending on species composition, slope class, visual absorption capability (VAC), and existing visual condition (EVC), percentage removal and number of passes have to be determined for site specific conditions.

VQO: Partial Retention (PR)

The partial retention VQO indicates that alterations remain visually subordinate to the natural appearing landscape. Repetition of the line, form, color, and texture is important to ensure a blending with the dominant elements.

In the managed forest, Partial Retention is applied to areas where landscapes are of moderate to high aesthetic importance and where management activities generally can match the landscape character and do no cause an obvious intrusion (e.g. where landscapes can absorb some degree of change).

- Selection harvesting or group selection (opening up to two tree lengths in width) are appropriate systems to achieve this VQO.
- Clearcut logging may be used as long as the conditions below are followed.
    - If natural openings exist, these will guide the size and shape of the visible portions of clearcuts. In some cases, man-made openings (e.g., agricultural clearings) "fit the landscape and may be used in lieu of natural openings. Appropriate clearcut scale, in many cases, will be subordinate in size to existing openings.
    - If no natural openings exist, then repetition of natural or natural appearing line, form, color, and texture can be utilized to blend alterations into the landscape. The maximum allowable visible portion of clearcuts is also determined by the viewing distance (distance between viewpoint and area to be harvested).

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[1] Source: Prince George Region Landscape Guidelines - 1990.

- As a general rule, to meet the VQO of Partial Retention, the visible portion of non-greened-up (non-VEG) openings (see Section 3.1, 3.2 for Guidelines on Visually Effective Green-up) created by harvesting operations range between 6-15 per cent of the landscape unit* or landscape management unit ** as seen in perspective from the viewpoints, appropriately sized, shaped, and distributed.
- Topographic variation, viewing angle, vegetative or permanent screening, and viewing distance will greatly influence the size of clearcuts that will meet the guideline for openings seen in perspective as outlined above. Figure 4 illustrates schematically the influence of viewing distance on opening size when seen in perspective view.

VQO: Modification (M)

The Modification VQO allows alterations to dominate the landscape. However, these alterations must borrow from natural line and form to such an extent and on such a scale that they are comparable to natural occurrences.

In the managed forest, Modification may apply to areas of moderate to low sensitivity and where managed landscapes are more common.

- Clearcut logging generally applies to this VQO. However, areas where partial cutting results in low numbers of residual stems per hectare may fall into this category.
- Although this VQO allows dominant changes, design considerations are very important to achieve Modification,. Cutblock location, size and shape, as well as the distribution and relationship between openings requires careful consideration.
- To meet this VQO as a general rule, from 16-30 per cent of a landscape unit or landscape management unit, as seen in perspective view, may display non-VEG clearcuts of appropriate size, design and distribution.
- As with Partial Retention, topographic variation, viewing angle, screening, viewing distance, and existing visual condition will greatly influence the size of openings that will meet the criteria established for Modification.

VQO: Maximum Modification (MM)

The Maximum Modification VQO permits a dominant change to the landscape. Alterations may be out of scale or show detail quite different from natural occurrences when viewed from close range. From the background, changes should appear to be natural occurrence.

As a general rule 31-50 per cent of the landscape unit or landscape management unit, seen in perspective view, may be covered in non-VEG clearcuts in this VQO. In the managed forest, Maximum Modification may apply to areas where altered landscapes are common and where resource use activities dominate the landscape, mostly in background viewing opportunities.

MM is also reserved for areas where extensive harvesting may appear in response to salvaging fire or insect and disease killed timber. Large scale openings are acceptable, but design remains an important consideration.

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* *Landscape units* are areas having visual similarity. For example, the following may all be considered separate landscape units: a) mountain face, b) side valley slope right side, c) side valley slope left side, d) shoreline, e) low slope behind shoreline, f) extensive forested slope behind and above bench, g) alpine peak.

** *Landscape management units* (LMU's) can regroup several landscape units and their size is generally defined by the land area visible from one or more viewpoints.

VQO: Excessive Modification (EM)

Excessive Modification occurs where forest management activities create excessive contrast in form, line, color and texture, and are visually unrelated to the surrounding landscape.

Examples of Excessive Modification are oversized cutblocks and shapes poorly related to scale of landform and existing vegetation openings, excessive road construction an steep slopes (which can create strong linear contrast and side casting), and any visible result of poor practices, such as excessive amounts of slash, cull logs, root wads, erosion, etc.

Though not an appropriate VQO for forest practices, EM might be used to describe existing visual conditions. EM might occur by design where landscape management is not applicable.

Five-year plan landscape analysis submission. Requirements according to sensitivity level.

Sensitivity level	Criteria	Examples	Landscape Submission Content

High	• directly seen in near view
	• dominant in more distant view
	• High quality/unique features
	• High number of viewers or long duration of view
	• High concern for visual quality
		• foreground slopes adjacent to travel routes
		• viewpoints
		• mid and background views of steep and/or prominent slopes and features
		• special visual or recreation features (e.g. waterfalls, rock formation , land/water interfaces)
		• communities
		• rest stops and points of interest
		• parks or recreation sites
		• focal views caused by highway alignment, viewpoint location or signs
		• areas important for tourism
		• areas where residents have expressed concern
			• Sightlines from most prominent and worse case scenario viewpoints.
			• 1:5,000 scale topographic map showing sightline locations and visible areas.
			• 1:20,000 overview map showing viewpoints/photo points relative to block.
			• Photographs with acetate overlay showing proposed block impact (indicate lens used i.e. 50mm)
			• Analysis write-up of which will contain comments on:
			  • sensitivity/visibility/key features
			  • existing visual condition/visual absorption capability
			  • recommended visual quality objective
			  • strategy/prescription to achieve objective
			• Digital terrain model/computer analysis.
			• Video imagery
			• public presentation(discuss options with landscape specialist.

Medium	• moderate number of viewers • in clear view but not dominant • moderate duration of view • moderate concern for visual quality	• Moderate use recreation sites • less diverse scenic composition and flatter slopes • areas seen only through small breaks in screening • less concern expressed than for other areas	• 1:20,000 overview map showing viewpoints/photo points relative to block. • Photographs with acetate overlay showing proposal block impact • Write-up as per above example. • In some situations sightlines will be required to confirm visible area.
Low	• viewed from a distance • low prominence • short duration of view, partially screened or viewed obliquely • low number of viewers • low concern for visual quality	• background distance zones • flatter features which blend into landscape • views through a screen of trees or at an angle from the line of sight • sparsely populated or infrequently travelled areas • little concern expressed	• Comment in opening description not viewed by public from any significant vantage point. • Where questionable sightlines should be done or a field trip conducted to confirm visibility and sensitivity.

Appendix A.4

Water Quality Report
Nahmint Lake

Zenon Environmental. Inc.

B.C. Laboratory Services
report for form 00027945

Fish - Vancouver Island **Attn. Peter Law** **Sample 9000500 4**

Site: Nosite Nahmint Lake
From: 90/06/26:0000 To : 90/06/26:0000
Depth Range: 0.5 0.5 Tide
Sample State: Fresh Water
Sample Comment:

Parameter Description	**Result**	**Units**	**Analytical Technique (Sparcode/Medium/Pres'n)**
pH	7.4	pH units	Automated pH Meter (00041220/35/36)
Specific Conductance	48	us/cm	Cond. Meter Siebold (001111/60/35/36)
Res. filterable 1.0u	38	mg/L	Gravimetric 1.0u Filter (007H1032/35/36)
Alkalinity Total 4.5	23.5	mg/L	Automated Electrometer (01021210/35/36)
Hardness Total	22.1	mg/L	Calculated Result (0107CALC/__/__)
Sulfate Dissolved	1.1	mg/L	Auto Methyl Thymol Blue (11211400/35/36)
Calcium	7.98	mg/L	HN03 Dig: ICP Analysis (Ca-T0040/05/02)
Magnesium	0.52	mg/L	HN)3 Dig: ICP Analysis (Mg-T0040/05/02)
Nitrogen Organic-Tot	0.01	mg/L	Calculated Result (0112CALC/__/__)
Nitrogen Kjel. Tot(N)	0.02	mg/L	Block Deg. Auto. Color (01131360/35/36)
Nitrogen Total	0.05	mg/L	Calculated Result (0114CALC/__/__)
Nitrogen Amm. Diss (N)	0.008	mg/L	Automated Bertholot meth (11081351/35/36)
Nitrogen N03+N02 Dis	0.03	mg/L	Auto Cadmium Reduction (11091350/35/36)
Phosphorus Ort. dis-p	<0.003	mg/L	Auto Ascorbic Acid (11181380/35/36)

Zenon Environmental. Inc.

B.C. Laboratory Services
report for form 00027945

Fish - Vancouver Island **Attn. Peter Law** **Sample 9000300 4**

Site: Nosite Nahmint Lake
From: 90/06/26: To : 90/06/26:
Depth Range: 0.5 0.5 Tide
Sample State: Fresh Water
Sample Comment:

Parameter Description	**Result**	**Units**	**Analytical Technique (Sparcode/Medium/Pres'n)**
Phosphorus Total	0.004	mg/L	Dig Auto Ascorbic Acid (P—T1390/35/36)
Phosphorus Tot. Diss	0.004	mg/L	Dig. Auto. Ascorbic Acid (P—D1390/35/36)
Sodium Dissolved	1.1	mg/L	Auto. Flame Emission (Na-D1331/35/36)
Chloride Dissolved	1.3	mg/L	Auto. mercuric thiocyan (11041330/35/36)

Zenon Environmental. Inc.
B.C. Laboratory Services
report for form 00027945

Fish - Vancouver Island	**Attn. Peter Law**	**Sample 9000500 4**

Site: Nosite Nahmint Lake
From: 90/06/26:0000 To : 90/06/26:0000
Depth Range: 20.0 20.0 Tide
Sample State: Fresh Water
Sample Comment:

Parameter Description	**Result**	**Units**	**Analytical Technique (Sparcode/Medium/Pres'n)**
pH	7.3	ph units	Automated pH Meter (00041220/35/36)
Specific Conductance	8	uS/cm	Cond. Meter Siebold (00111160/35/36)
Res. Filterable 1.00	40	mg/L	Gravimetric 1.00 Filter (007H1032/35/36)
Alkalinity Total 4.5	22.8	mg/L	Automated Electrometer (01021210/35/36)
Hardness Total	19.8	mg/L	Calculated Result (0107CALC/—/—)
Sulfate Dissolved	1.1	mg/L	Auto Methyl Thymol Blue (11211400/35/36)
Calcium	7.13	mg/L	HN03 Dig: ICP Analysis (Ca-T0040/05/02)
Magnesium	0.49	mg/L	HN03 Dig: ICP Analysis (Mg-T0040/05/02)
Nitrogen Organic-Tot	0.01	mg/L	Calculated Result (0112CALC/—/—)
Nitrogen Kjel. Tot(N)	0.02	mg/L	lock Dig. Auto Color (01131360/35/36)
Nitrogen Total	0.06	mg/L	Calculated Result (0114CALC/—/—)
Nitrogen Amm. Diss(N)	0.005	mg/L	Automated Bertholot method (11091350/35/36)
Nitrogen [illegible]+N0$_2$ Dis	0.04	mg/L	Auto Cadmium Reduction (1191350/35/36)
Phosphorus Ort. Dis-P	<0.003	mg/L	Auto Ascorbic Acid (11181380/35/36)

Zenon Environmental. Inc.

B.C. Laboratory Services
report for form 00027945

Fish - Vancouver Island **Attn. Peter Law** **Sample 9000500 5**

Site: Nosite Nahmint Lake
From: 90/06/26:0000 To : 90/06/26:0000
Depth Range: 20.0 20.0 Tide
Sample State: Fresh Water
Sample Comment:

Parameter Description	**Result**	**Units**	**Analytical Technique (Sparcode/Medium/Pres'n)**
Phosphorus Total	0.003	mg/L	Dig Auto. Ascorbic Acid (P—T1390/35/36)
Phosphorus Tot. Diss	<0.003	mg/L	Dig Auto. Ascorbic Acid (P—D1390/35/36)
Sodium Dissolved	0.9	mg/L	Auto. Flame Emission (Na-D1331/35/36)
Chloride Dissolved	1.1	mg/L	Auto mercuric thiocyan (11041330/35/36)

TOWARDS AN OLD GROWTH STRATEGY

• Fall Bulletin • Ministry of Forests • October 1990 •

Components of the Old Growth Strategy:

Objectives and planned results of the sector teams

Old Growth Strategy at the halfway mark

The Old Growth Strategy Project is just past the halfway point. As a result, the work of the 5 sector teams has reached the stage where picture of the eventual strategy is emerging. This summary of team objectives and planned results will serve to focus the remaining work of the project and to inform all interested parties about the nature of the strategy.

Sector Teams working together

Readers will notice that there is considerable common ground among the teams. In fact, the members of the 5 teams are undergoing an intensive collaboration involving regular inter-team discussions. They are working to ensure that the information results of one team arrives in time to serve the objectives of another.

Request for public feedback

The objectives and planned result statements recorded in this Fall Bulletin will probably undergo some further refinement at the November 8-10 full Project meeting. The teams would value any public comment on the substance of this bulletin that would assist them in improving the eventual Old Growth Strategy.

Old Growth Project Contact List

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• *prepared by Salasan Associates Inc. • Victoria B.C.* •

Questions and answers about the Old Growth Project

Who initiated the project?

The project was initiated by the **Minister of Forests, the Hon. Claude Richmond,** in response to the recommendations arising from the Old Growth Workshop convened by the Ministry of Forests in November, 1989. The recommendations which form the basis of the project are published in *"Towards an Old Growth Strategy: Summary of the Old Growth Workshop"* distributed by the Ministry of Forests in March, 1990. Old Growth concerns were previously identified by the public in submissions to the Minister of Forests during review of proposed conversion of forest licenses to tree farm licenses and were the subject of inter-ministerial meetings early in 1989.

How is the project mandated?

The project was prepared with the approval of the Forest Service Executive and the Minister of Forests, has been approved by the Cabinet Committee on Sustainable Development, was formally mandated by Cabinet, and was approved for funding by Treasury Board.

What is the overall objective of the project?

The overall objective is to develop a working strategy for the management of old growth forests in British Columbia. Elements of the strategy will include, at minimum, a research agenda; a procedure for old growth inventory; a review of current legislation and policies relevant to old growth management; identification of forest management practices consistent with conservation of old growth values in commercially managed landscapes; development of a provincial framework for identification and reservation of representative old growth stands to meet a wide variety of social, economic, environmental, cultural and scientific needs; assessment of the social and economic considerations involved in managing old growth.

Who is managing the project?

In order to ensure integration of the project among key ministries, the project will be managed by an Inter-ministry Management Committee, chaired by the Chief Forester and co-chaired by representatives of the ministries of Parks, Environment, and Regional and Economic Development. The members of the committee are:

Inter-ministry Management Committee

John Cuthbert;
Chief Forester, Chairman

Jake Masselink:
ADM, Ministry of Parks

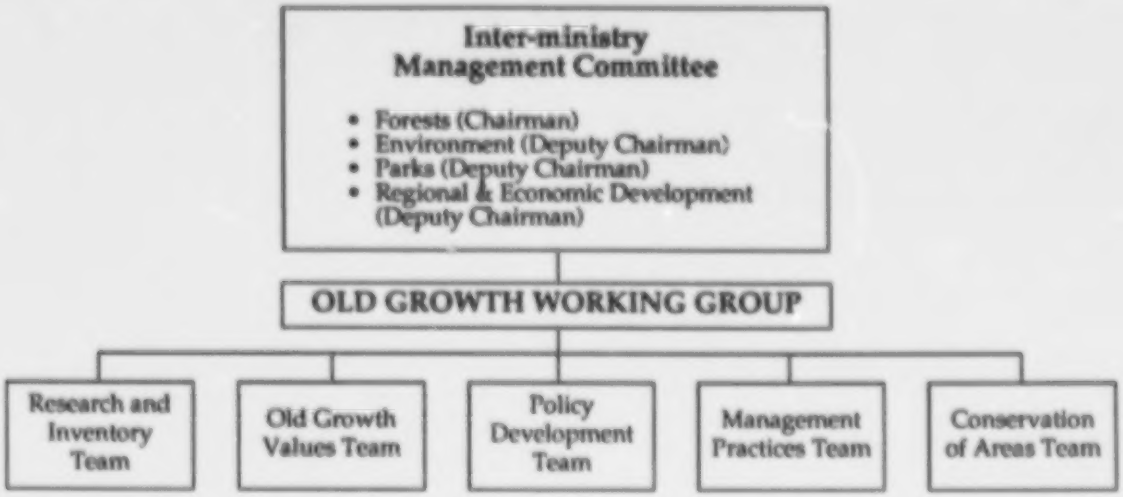
Kathleen Mayoh:
ADM Management Services,
Ministry of Regional and Economic Development

Jim Walker:
ADM, Ministry of Environment

Denis O'Gorman:
Director, Policy and Planning Branch
Ministry of Forests

How is the project being integrated with other environmental initiatives?

The Inter-ministry Management Committee is maintaining contact with the **Forest Resources Commission, The Round Table on Environment and Economy, The Environment 2001 Project** of government and other issue resolution initiatives dealing with specific areas in which there is an old growth component.


Inter-ministry
Management Committee
• Forests (Chairman)
• Environment (Deputy Chairman)
• Parks (Deputy Chairman)
• Regional & Economic Development (Deputy Chairman)
OLD GROWTH WORKING GROUP
Research and Inventory Team
Old Growth Values Team
Policy Development Team
Management Practices Team
Conservation of Areas Team

What is the organizational structure of the project?

The Inter-ministry Management Committee oversees an "Old Growth Working Group" with five small teams focussing on different aspects of the project. Chairmen and representative members of the teams constitute the Working Group which is convened at the end of each workshop to integrate the results. The small teams hold their main meetings concurrently in the same location with agendas that allow the work of all parts of the project to be shared and integrated as it develops. Basic terms of reference for each of the groups are set out in the summary of the Old Growth Workshop of 1989. These were augmented and refined by the groups at their initial meetings in order to reflect the insights of the membership.

How is the project supported?

Funding was approved to provide for logistic support to the project, travel and accommodation expenses for public participants, convening of the necessary meetings, research support and publication of the bulletins. A Project Office is maintained by **Irene Ronalds of NéVé Environmental Project Services**, the project is facilitated by **Dr. Bruce Fraser of Salasan Associates Inc.**, and the **Ministry of Forests** liaison person is **Bill Marshall.**

What is the schedule?

The project is scheduled to produce recommendations for implementation of an old growth strategy by March 31, 1991. These recommendations are expected to indicate the nature of the ongoing work that will be necessary to manage old growth forests consistent with the wide variety of values represented. The project will sponsor 4 major meetings of the Working Group and its teams in April,June, and November 1990, and January 1991; it will conduct a series of community meetings in November of 1990, and it will hold a representative workshop in February 1991. In between these meetings, the teams will work on specific agendas agreed to and coordinated by the Working Group.

What happens to Old Growth in the meantime?

The Conservation of Areas Team has identified, through a process of public participation, a number of areas potentially suitable for short-term deferral in order to maintain options for inclusion in a long-term framework of reserves. Deferral recommendations from a sub-committee of the Conservation of Areas Team were published in September 1990 and are now undergoing further review before consideration by government (see p.8 for more details).

Sector team reports

Policy Development Team: Objectives and Planned results

Objective: To prepare an overall statement of purpose, and a framework for implementing the old growth strategy.

Planned result: A statement of overall purpose to be delivered to participants for approval at the November meeting of the project; a framework that identifies the key components to be addressed by the old growth strategy.

Objective: To incorporate the objectives of the old growth working teams for sectors of interest including:

- community stability
- heritage concerns
- sustained harvest
- tourism
- biodiversity
- research
- other values which are to be detailed by the Old Growth Values Team

Planned Result: A statement of social, economic, environmental and scientific objectives to be served by the old growth strategy and to prepare a "table of contents" of the strategy which can act as a unifying framework for integration of the effort of the 5 sector teams.

Objective: To assess the policies, procedures and process for coordination of activity and implementation of the strategy at the provincial level.

Planned result: A proposed system for inter-agency coordination for the activity on the strategy related to research, inventory, forest management, assessment of social and economic values, conservation of areas, public involvement, communications, implementation, monitoring and evaluation of the strategy.

Objective: To review the existing planning systems and processes at the regional level in order to identify their current capacity to accommodate old growth values, management, conservation and public involvement objectives. Initially this would involve the Ministries of Parks, Forests, Environment, Lands, Tourism, and Regional and Economic Development.

Planned result: A set of recommended policies and procedures to improve the effectiveness of existing agency and interagency planning systems in recognizing old growth objectives and implementing the old growth strategy.

Objective: To review the specific management guidelines being used at the landscape and stand level for development of management zones, conservation of biodiversity, calculation of the AAC, determination of community support, wildlife management, recreation and tourism, in which old growth concerns are relevant.

Planned result: A set of guidelines for establishment of landscape and stand level actions to recognize and respond to old growth objectives including : core conservation areas, critical habitat designation, forest management practices, silvicultural alternatives, and the establishment of management and buffer zone boundaries.

Next Old Growth Project Meeting

NOVEMBER 8-10, 1990

HARRISON HOT SPRINGS
B.C.

Ecological Research & Inventory
Objectives and Planned results

Objective: To inform all interested parties about the extent of published work on old growth forests relevant to British Columbia.

Planned result: An annotated bibliography of old growth literature to be produced by January 1991.

Objective: To prepare definitions of old growth relevant to each biogeoclimatic zone and to forested ecosystems within each zone.

Planned result: A set of working definitions of old growth for each zone for October 31, 1990.

Objective: To improve the usability of the B.C.. Forest Inventory in determining how much old growth exists under the working definitions and where it is located within TFL's, TSA's, and major parks.

Planned result: A system for questioning the inventory data base to get the information on old growth desired in quantitative and geographical form by biogeoclimatic zone and for major parks. TSA data to be available for the Coast and the Southern Interior by November 1990 and to TFL's by March 1991. For most Parks there are current usable inventories. The exceptions are some of the large parks established before the inventory program including Wells Gray, Tweedsmuir and Strathcona.

Objective: To conduct a "problem analysis" for old growth which reviews the state of existing information and identifies the information gaps which should be addressed by the research program.

Planned result: A published problem analysis in draft form for October 31, 1990 and final publication in March 1991.

Objective: To conduct a specific research program in support of the information needs of the sector teams of the old growth project.

Planned result: A block of approximately 30 research projects requested by old growth project sector teams. Fourteen of these initiatives were listed in the August Research Bulletin. The full list will be published by December 1990.

Objective: To conduct a research project entitled *"Identification of required steps in the development of ecologically viable old growth conservation and management strategies for British Columbia landscapes developed through a North Coast case study"*.

Planned result: A published report by January 1991 which is intended to generate a best estimate, under the current state of inventory information and applied theoretical knowledge, of the required minimum configuration of conservation lands and altered forest management techniques needed for the long term maintenance of biotic diversity on the North Coast of British Columbia.

Old Growth Values
Objectives and Planned results

Objective: To articulate the full range of values inherent in old growth forests and to prepare an assessment framework for evaluating both the quantifiable and intangible effects of land use and management options.

Planned result: A socio-economic companion report developed in cooperation with the North Coast Conservation and Management study. The report will present a statement of old growth values and a socioeconomic evaluation framework to assess the impact of old growth conservation and management options identified in the North Coast study. The results of the report are intended to help refine the tools for assessing both the objective and subjective values for use in the long term strategy. The target date for completion is: draft by January 1991 and final report by March.

Objective: To form a better understanding about the nature of rural community dependence on the forest sector, and the importance of community stability and forest-based employment to residents of these communities.

Planned result: A practical and workable framework to assess the impact of permanent change in the forest industry on dependent communities, in particular those changes which might arise from exercise of old growth conservation and management options defined by the old growth strategy. The target date for completion is: draft by February 1991 and final report by March.

Objective: To document old growth values and the methods available for measuring those values in general and on specific sites.

Planned result: A final report to the Old Growth Project articulating old growth values and measurement methods suitable for application to evaluations of areas proposed for inclusion in the long term conservation of areas provincial framework.

Management Practices
Objectives and Planned results

Objective: To define old growth attributes for coast and interior biogeoclimatic zone examples and to review the management practices suitable to conserve these attributes in the commercially managed forest at the landscape and stand levels.

Planned result: A process-oriented statement of the management practices available to identify and conserve old growth attributes as defined for each zone and consistent with the standard definitions of old growth published by the Research Team. This treatment will incorporate an assesement of "new forestry" practices which appear to be applicable to the management of old growth.

Objective: To design a framework for assessing the utility of various forest management practices in conserving specific old growth attributes.

Planned result: A draft framework for selection of management practices that can be employed to conserve old growth attributes to meet defined objectives in the commercially managed forest land base.

Objective: To prepare a zoning strategy to determine management and buffer zone practices consistent with objectives established for core old growth reserve areas.

Planned result: A commercial forest zoning and buffer management system that can be applied to assist in meeting the conservation objectives of core old growth reserve areas as defined in the conservation of areas provincial framework.

Conservation of Areas
Objectives and Planned results

Objective: To identify critical areas of old growth forest for short term reservation to maintain options for inclusion in an eventual provincial reserve framework.

Planned result: Recommendations to the IMC for criteria, process, and selection of deferral areas; recommendations to IMC concerning assessment of short term impact on affected parties, and identification of specific areas proposed for deferral. This result is assisted by a Deferral Review Process described on page 8.

Objective: To develop an overall provincial framework for conservation of old growth forests representative of the biogeoclimatic zones of the province and sensitive to the range of old growth values identified and articulated by the Old Growth Values Team.

Planned result: Statements of principle and objectives for conserving ecological, recreational, spiritual, cultural, social and economic values within a framework of core old growth forest land reserves representative of the biodiversity of the province.

Objective: To develop a systematic rationale for conservation zones and specific reserve areas.

Planned result: A system for defining conservation areas and their associated buffer zones; criteria for selection of conservation areas and establishing their sizes relative to conservation objectives; linkage with the strategies inherent in the Parks System Plan, the Ecological Reserves System Plan and the Wilderness System Plan.

Project Timetable Update

1990

October	Teams working on their 60 day work plans
	Inter-team meetings to refine detailed objectives and work on reports
	Initiation of Deferral Review Process
November	**Full Project Meeting** at Harrison Hot Springs Nov. 8-10
	Initiation of **Community Visits:** exact locations and times T.B.A.
	Continued team work and consultant studies commissioned by the teams
December	Preparation of an **Interim Progress Report** on Development of the Strategy

1991

January	Filing of Consultant Reports, draft team studies
	Full Project Meeting Jan. 17-19, location to be arranged
February	Filing of Consultant and Team Reports
	Provincial Old Growth Workshop to discuss a Draft Strategy, Feb. 22 to 24
March	**Final Report:** Draft Old Growth Strategy for public review

Conservation of areas: Deferral Review Process Update

Deferral Review Team

On October 12, 199[illegible], in accordance with the published deferral review process, the Inter-ministry Management Committee (IMC) established a Review Team. The Team consists of:

- two members of the IMC:
  John Cuthbert, Chief Forester as Chairman
  Jim Walker, Ministry of Environment
- three Old Growth Project Team Chairmen:
  Alex Grzybowski, Ministry of Tourism, Old Growth Values Team
  Andy MacKinnon, Ministry of Forests, Ecological Research and Inventory Team
  Doug Janz, Ministry of Environment, Policy Development Team
- two technical support staff:
  Bill Marshall, Ministry of Forests, secretary
  Gary Runka, LandSense Ltd., consultant

Weekly meetings

The Review Team will meet weekly to analyze incoming requests for review of the original deferral recommendations. They will be looking at any new information which will assist in applying the deferral criteria and will be assembling socio-economic impact information for consideration by the IMC. The Consultant will be in contact with Forest Region and District staff for information and will be in direct contact with proponents and affected licensees.

Contact with affected parties

Recommendations of the Review Team will be made public and will be communicated both to the original proponent of a deferral area and to directly affected forest licensees. Every effort will be made to deal quickly with deferral review on areas that affect immediate operations of licensees.

Report to Cabinet

The IMC will consider these recommendations in preparing their report to the Sustainable Development Committee of Cabinet where any decisions to implement formal deferrals will be made.

Contact point

Deferral Review requests are to be forwarded to the Old Growth Project Officer where they will be recorded and placed in the hands of the Review Team. Forest Licensee concerns and comments presented through normal channels to Ministry of Forests District, Region, or Victoria offices will also be assembled by the Review Team.

OLD GROWTH PROJECT OFFICE
1927 ST. ANN STREET,
VICTORIA, B.C.
PHONE : 598-9003
FAX: 598-9001

TOWARDS AN OLD GROWTH STRATEGY

• Deferral Review Team Report • Old Growth Strategy Project •

CONSERVATION OF AREAS
DEFERRAL REVIEW TEAM REPORT
JANUARY 10, 1991

On October 12, 1990, in accordance with the Deferral Review Process outlined at the Manning Park workshop, the Inter-ministry Management Committee (IMC) established a Review Team consisting of:

three Old Growth Project Team Chairmen:
Alex Grzybowski, Ministry of Tourism: Old Growth Values Team
Andy Mackinnon, Ministry of Forests: Ecological Research and Inventory Team
Doug Janz, Ministry of Environment: Policy Development Team

two technical support staff:
Bill Marshall, Ministry of Forests: secretary
Gary Runka, Landsense Ltd.: consultant

The Review Team met October 12, 19, 25, November 1, 15, 22, 29, 1990; and January 3, 1991 to analyze incoming requests for review of the original deferral recommendations. The Team looked at any new information which would be of assistance in applying the deferral criteria.

As stipulated in the Deferral Review Process, the recommendations of the review team are to be made public. These recommendations are summarized in the following pages.

• *prepared by Salasan Associates Inc.* • *Victoria B.C.* •

CANDIDATE AREA

Nahmint (CP 517), #3, Port Alberni Forest District

ORIGINAL SUB-COMMITTEE DEFERRAL RECOMMENDATION

Deferral

DEFERRAL REVIEW TEAM ANALYSIS AND RECOMMENDATION

- The Deferral Review Form submitted by the Carmanah Forestry Society and MacMillan Bloedel"s (M&B) proposal were reviewed.
- There is agreement that CP 517 was misidentified and harvesting in this block should be permitted.

The Review Team recommends the deferral of CP 517 be withdrawn and a map notation be placed over CP 518 in order to protect the Douglas fir old growth (CP 518 is not scheduled for harvesting in the next two years)

The Review Team also recommends the LRUP committee be directed to consider old growth and are encouraged to proceed with MacMillan Bloedel's recreation / old growth proposal for the north west end of Nahmint Lake.

CANDIDATE AREA

Sikanni Chief River, #85, Fort St. John Forest District

ORIGINAL SUB-COMMITTEE DEFERRAL RECOMMENDATION

Deferral

DEFERRAL REVIEW TEAM ANALYSIS AND RECOMMENDATION

- The Deferral Review Form submitted by Canadian Forest Products Ltd. and the revised Ministry of Forests / Ministry of Environment proposal were reviewed.
- The Review Team acknowledged that habitat diversity was maintained in the revised proposal but old growth values associated with scarcity and fragmentation were better maintained in the original proposal.

The Review Team recommends that the original "deferral" recommendation for the original area be retained.

Licensed guides authorized to operate in Nahmint

Fiscal Year 1989/90

Angling Guides

Ivanisko, Edward	Campbell River, B.C.
Murphy, Marilyn	Port Alberni, B.C.
Nexedlt, Terry	Port Alberni, B.C.
Norie, Kenneth	Sidney, B.C.

Hunting Guide

Weib, Wayne	Pacific Rim Guide Outfitters Port Alberni, B.C.

Windthrow management

In natural forests, sooner or later almost every tree is blown down. Of course there are many factors that lead to the moment when each tree falls. Age, insect or disease attack, the toppling of nearby trees, or other catastrophes can all play a part; wind is almost always the final agent that returns the tree to the forest floor.

Natural versus unnatural windthrow

Catastrophic windthrow can occur in any region of our province. Whether man's influence is present or not. Like naturally-occurring forest fires, severe storms can play an important role in forest renewal; and just like forest fires, storm winds rarely level all the trees in a given area. Their aftermath is usually a hodge-podge of surviving trees left standing amid a tangle of fallen and leaning stems.

Although blowdown has a purpose in nature, man's activities in the forest can increase the damage from strong winds by artificially opening up the forest canopy. Selection cutting and clearcutting can both result in unnatural amounts of blowdown, if the residual timber stands are left too exposed to the wind's full force.

Consequences of windthrow

Certain rates of windthrow are natural and necessary to maintain balanced forest ecosystems. The periodic toppling of trees onto the ground or into streams and waterways contributes important, and sometimes critical, biomass needed to maintain environmental health.

On the negative side, in managed forest areas extensive windthrow is undesirable for several reasons:

- tangled, uprooted stems greatly increase the danger of injury to workers during logging operations;
- large amounts of windfall can become incubators for harmful insects that may then attack nearby forests;
- extensive blowdown can disrupt or confound orderly harvesting and silviculture plans;
- blowdown can sometimes trigger slope failures or other forms of soil erosion; and,
- unsightly blowdown can reduce the recreational value of an area.

Windthrow susceptibility

It is impossible to predict with certainty just where windthrow will occur. Windthrow susceptibility is a function of a number of interacting factors (e.g., shallow-rooted trees growing on exposed ridgetops will usually be more vulnerable than deeply-rooted trees growing on protected valley floor). Expert assessment of the interacting factors is essential in evaluating the windthrow potential in a timber stand. The factors affecting a forest stand's susceptibility to windthrow are:

Natural

- Rooting depth
- Soil depth
- Soil drainage
- Terrain
- Tree height
- Topography

Man caused

- Cutblock location
- Falling boundary orientation
- Percentage of original stand removed (in areas subjected to partial cuts).

Windthrow in Nahmint

The forests of the Nahmint Valley are not immune to catastrophic windthrow, but neither do they appear particularly prone to it. The valley bottom timber seems capable of withstanding typical storm winds. The orientation of the valley itself may shelter some low-elevation stands from the brunt of southwesterly storms. The valley's midslope timber is more vulnerable to wind damage and the ridgetop stands are more susceptible still, because of their exposure to the full force of winds from several directions.

Windthrow has the potential to confound plans to maintain the natural forest along the lakeshores and riverbanks in the Nahmint, and to occasionally disrupt harvesting plans elsewhere in the valley. Storm winds will almost certainly take some toll upon portions of certain biodiversity corridors, which by necessity traverse the valley from side to side. When dealing with the forces of nature there can be no guarantee of complete success, but the following strategies are recommended to reduce the frequency and severity of windthrow damage:

The likely direction of damaging winds may be assessed by recording and plotting the orientation of naturally-occurring windthrow in the immediate area (e.g. record the orientation of each windthrow tree intersected by a falling boundary). By recording the orientation of local windthrow, the effects of hillslope aspect and topographic control of wind may be integrated.

If a locality contains considerable natural windthrow, especially if it appears chronic (different ages of windthrow), the location is probably vulnerable. However, if the damage dates back to a major windstorm (e.g., if the age of the new forest indicates the old stand fell victim to the major hurricane of 1908) then the remaining stand is perhaps more windfirm than the amount of windfalls would indicate.

Tree species

Data linking tree species to windthrow is quite variable. Cedar may be less vulnerable than other species but the relationship is weak. Snags, lacking a crown to act as a sail, are typically less vulnerable than live trees; consequently 'spike top' cedar, which typically has a small live crown area, can be expected to be less vulnerable than other trees.

Strategies to reduce windthrow damage around clearcuts

Selectively fall taller trees along the setting boundaries, but do not remove more than five to 10 percent of the total number of trees. Excessive thinning will increase canopy roughness resulting in more energy transfer into the canopy and increase the risk of windthrow. Similarly, tree-to-tree contact tends to dampen the sway period created by wind; excessive thinning will reduce this damping effect.

Locate windward boundaries on deep, well-drained soils with deeply-rooted trees. Fluvial/debris flow fans provide some of the most windfirm cross-valley boundary locations.

If a windward boundary proves to be windfirm, adjust logging plans so that it is not logged in the short-term. This will allow the stand to act as a windbreak for logging activities in its lee.

If possible, include timber growing on poorly-drained areas within areas to be logged. Alternatively leave a buffer of timber growing on well drained soils between the poorly-drained soils and the setting edge. Treat areas of shallow soils in a similar fashion.

Avoid locating setting boundaries in areas with evidence of previously extensive or chronic windthrow.

If a setting boundary experiences windthrow, do not simply salvage the windthrow and establish a new boundary on the same topographic, soil and stand conditions. Re-establishing the conditions that resulted in windthrow in the first place, will likely lead to further windthrow. Consider leaving the windthrown area as a protective buffer for the timber behind, especially if the windthrow appears to have stabilized. Alternatively, look for changes in topographic, soil or stand conditions that may result in a more windfirm situation, then establish the new boundary at that location.

Establish a windfirm boundary and from that point log progressively into the wind. This tactic may be used at more that one location in a valley so that the cut is well dispersed.

Utilize natural landscape boundaries to create windfirm edges (e.g., rock bluffs, bogs, non-merchantable timber, ancient landslide or snow avalanche tracks).

4.0 Strategies to minimize windthrow within partial cuts

When logging small clearcut patches, ensure that all poorly-drained areas, or areas of shallow soils are completely logged.

When leaving small groves or patches of timber, ensure that they are located on deep, well-drained soils.

When selective logging, do not remove more than 20 per cent of the stems. Concentrate on removing the taller stems.

Do not begin a selective cut at a clearcut edge ,especially if poorly-drained or shallow soils are present.

Rooting depth

Rooting depths are determined by excavating soil pits one to two metres away from typical trees in the stand. Rooting depth is determined by measuring the depth from the top of the forest floor to the deepest live root in the pit, irrespective of size. If windthrown trees are present, an estimate of rooting depth may be taken from the root mass of the tree. Use the rooting depth near the perimeter of the root mass rather than the centre, as rooting depths at the edge of the root mass likely correlate better with rooting depths determined from soil pits (in some cases rooting is deeper near the centre of the root mass).

Windfirm streamside and biodiversity corridors

The apparent windfirmness of streamside timber in the Nahmint indicates that, provided the fisheries protection zone boundaries are laid out parallel to the direction of the strongest winds, blowdown from typical storms should not be severe. Selection logging of the buffer zone portion of the fisheries protection zones must be aimed at providing as windfirm a boundary as possible. In those areas where the stream channel meanders, the protection zones may require additional width in order that their edges do not present a vulnerable 'face' to the wind (See Figure 2).

Biodiversity corridor boundaries

Great care must be taken when establishing the windward boundaries of biodiversity corridors. These corridors present a particular challenge to windthrow management because in part they must traverse the valley at a right angle to the prevalent wind direction. They must also stand relatively undisturbed for a considerable length of time (typically 150 years); and are likely to be exposed to exceptionally strong winds during that period. Such boundaries must be located in the field by a multi-disciplinary team with the knowledge and experience to make expert judgment of windfirmness and to prescribe methods to minimize the impact of adjacent harvesting operations upon the biodiversity corridor's ability to withstand typical storms.

Harvesting of windthrown timber

Examination of the forests of the Nahmint bears out the fact that occasional natural windthrow has occurred there in the past. In recent years, one of the larger cut-over areas near the head of Nahmint Lake resulted when the planned leave-strip between two smaller blocks blew down.

In future, blowdown in or near reserve areas or protective corridors should be salvaged, if it is judged by the appropriate resource managers to be environmentally desirable to do so. Where approved, such salvage operations must be planned and carried out with as little disturbance as possible to the adjacent stands. The objective must be to remove the fallen stems and leave the reserve or corridor area as intact and windfirm as possible.

Nahmint watershed review

Some Proposals and concerns drawn from transcripts of verbal presentations

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Note: The complete transcripts of the presentations received at the open house sessions in August and September 1990, along with copies of each written submission received by the Review Team, are included in Volume II of this report.

Nahmint watershed review

Proposals and concerns drawn from transcripts of verbal presentations

Proposal or concern:	Respondent(s):	Action:
...In opening in the introduction I would like to state at this time and the report will mention it on 2 or 3 occasions that being that 1975 what it was politically and times being what they were and being that it is 1990 now, is that we are very concerned in 1975 that we were not involved in the committee, your committee, that you guys are sitting on there. We were concerned in 1979 & 1989 there was revisions made and again the IWA was not party to the committee process....	Monty Mearns IWA-C Local 1-85 4904 Montrose Port Alberni, B.C.	See sections 4.1.4 and 6.1.5
...The valley not only provides winter logging sites but has potential for transitional logging opportunities between the winter and spring months. The Nahmint drainage area must continue to be included in the AAC of the division. Deferment will mean certain unemployment....	Mearns	The terms of reference of the 1990 review did not allow deferral of all harvesting in the valley.
...There is not a recent old-growth inventory of the province, so I don't even know how I could address that...	Mearns	See section 4.7
...So the '75 study in doing the research of it, we think was a pretty good model in its day. Christ, it was state of the art, it is state of the art in terms of what some of the players in the industry are doing in 1990....	Mearns	See section 4.10
...talked about road building, talked about no side casting on 35 per cent slopes, I believe. Talked about long line logging machines, or overhead yarding techniques. It talked about leave strips of no less than 1,300 feet I believe. It talked about...	Mearns	See sections 4.4 and 6.1.1
...re-vegetation on bridge approach, top-slopes, anywhere there appeared to be barren ground due to industrial activity that was to be planted in some kind of vegetation, whether it be grass, trees, I don't know....	Mearns	See sections 4.1.4 and 6.1.5
...now the mechanics and the physical workings of a committee, obviously it matters not to me who the chairman of a committee could be or would be or should be. Christ, it could be the mayor, it could be the forest service, but what is important that the players of the users groups have a opportunity to sit down meet and discuss and that's pretty reflective to the way a trade union thinks.......Now I would see the City, the Regional District, the union, there is a environmental coalition group in Alberni, I would	Mearns	See sections 4.8 and 4.9

Proposal or concern:	Respondent(s):	Action:
see them sitting on there as well. There is also a share group, forest industry, and government agencies and it would be neutral to the respect that it wouldn't have ties with government. It would monitor, self-monitor on a steady basis and follow the activities more importantly to follow the harvest activities in the valley. There is a couple of things that we are not happy with going on in Nahmint. There should be steel-spars in there instead of grapple-yarding....	Monty Mearns IWA-C Local 1-85 4904 Montrose Port Alberni, B.C.	
The big issue to us is monitoring........More importantly is the monitoring, not so much the planning because I believe when you are involved in the monitoring your plans are going to change if they don't fit.	Mearns	Since the date when these comments were made in August 1990, the Port Alberni Forest District has been permitted to hire two additional field staff to monitor harvesting activities.
...I would agree put the road network in and I am talking about ridge top logging. I'm talking about putting road networks in on the top of mountains....	Mearns	See section 4.4.3
...I don't believe that the secondary road should go in. The mainlines of course,...	Mearns	See section 4.4.2

Nahmint watershed review

Proposals and concerns drawn from transcripts of verbal presentations

Proposal or concern:	Respondent(s):	Action:
...We don't think it is necessary, we think it would be irresponsible of anyone to lower the workforce to satisfy people that want to have what they called the wilderness experience by walking into Nahmint Valley....We think that you can do that without starting to take any part of that valley and put it into a preserved state. We also think that the '75 plan with some updating, was the thing that was good,...	Dave Haggard IWA-C Local 1-85 Port Alberni, B.C.	The 1990 Review process was not mandated to stop timber harvesting in the valley. See sections 4.1.4, 4.2.5 and 4.3.5
...It is unfortunate and I guess government has got to start and its agencies as the Forest Service have got to start accepting your responsibility. You allow changes in 1979 that took away as a rough estimate, I would say 50 per cent of the good things that the 1975 plan did.....'79 there was some major changes done in there that shouldn't have....	Haggard	See section 4.8
...I guess in closing what I would like to emphasize is that we think that, and Monty touched on it, is that maybe the logging methods should change that we should get back into as was talked about in the '75 plan, long-line machines that take away from the road building necessities, that create more employment.....	Haggard	See section 4.4.3
...I don't think we should ever accept lowering a standard to satisfy making a dollar. I think that is an injustice to the people that live here....	Haggard	See section 4.8

Nahmint watershed review

Proposals and concerns drawn from transcripts of verbal presentations

Proposal or concern:	Respondent(s):	Action:
...90 per cent of Sproat Lake Division's winter logging opportunity has to take place in the Nahmint Valley. That is for the period of... a 4 month period from December to April.... ...If, in fact because of the 90 per cent of our logging opportunity is in the Nahmint Valley, we experience significant reduction in our current cutting level in the Nahmint Valley it would reduce Sproat Lake Division from the 200 day operating, level and at the full level that we are employed today, to 8 to 9 months operation with very little employment and production or economic... logging or harvesting opportunities during the 4 winter months....	Tibor Jando Manager Sproat Lake Division MacMillan Bloedel Ltd.	The 1990 Review is not mandated to stop timber harvesting in the valley entirely.
...I think the previous speakers expressed their satisfaction and I would like to join them that I feel too, that it was a unique it was very enlightened modern plan in 1975 and I think it withstood the test of the times and also the activities of our operation in that area that by and large that plan today is still a very good and acceptable plan,...	Jando	See section 4.10
... some slash burning problems or prescribed burning problems, we need to change....	Jando	See section 4.4.8
...believe then that, in fact, a return of some of the ideals of the 1975 plan, in terms of specifics on things like leave strip size and size of blocks and green up periods is supported by now the management of MacMillan Bloedel....	Jando	See section 4.4.8
...The public use is much greater, therefore I accept and support there is an obligation on our part as managers of the forest, that we take the opportunities that are available in the Nahmint Valley to provide more opportunities for multiple use, for the enjoyment for the recreation for visual aesthetics and fisheries, wildlife, and whole host of things ...	Jando	
...They are acceptable, in fact we practice and I think that wildlife habitat, winter range and fisheries buffer strips should be part of the plan because they are very important without it there is no multiple use...	Jando	See sections 4.1.4, 4.2.5, 4.3.5 and section 7.0
...we want to experiment with the long line logging systems that will enhance or help us to address soil erosion, stream side logging, and other problems.	Jando	See section 4.4.3

Nahmint watershed review

Proposals and concerns drawn from transcripts of verbal presentations

Proposal or concern:	Respondent(s):	Action:
...Firstly, the entire road system should be completed before any logging takes place....	Gerard Jansen MLA Alberni Parliament Buildings Victoria, B.C. V8V 1X4	See section 4.4.2
...Lakes, streams, and rivers should have a leave strip left around them to protect the water course from siltation and provide shade for the marine life. It should also be noted that the large old growth trees that are susceptible to blow down in the leave strips be removed. Harvesting methods should utilize cable systems and long-line, rather than the present use of grapple-yarders. This would allow for a minimum of road work. The road work should use excavators and involve no side-casting....		See section 4.1.4
...all material should be end-hauled....	Jansen	See sections 6.1.1 and 6.1.4
...If a slope is too steep, it should not have roads and either long-line or heli-logging could be utilized. Snags and nesting sites must be identified so that our feather friends are protected...		See sections 4.2.5 and 4.4
...Recreation and wilderness sites should be established in all areas of the Nahmint Valley,...	Jansen	See section 6.1.4
...wet land areas at the mouth of the Nahmint where it enters the Alberni Canal along the lake in the upper reaches of the river and the alpine area....	Jansen	See section 7.1
...These should include mainly wilderness sites but at more heavily-utilized areas, such as the delta and the lake, they should include latrines, garbage disposals and picnic table to accommodate longer stays. Logging should encompass viewscape harvesting particularly around the lake so as to maximize recreational potential. Log booms be constructed and placed both at the inflow and outflow of the lake...	Jansen	See section 6.1.4
...Boating should be restricted to canoe, rubber rafts, or cartop boats and a power limit be placed on motors utilizing Nahmint Lake. There should be no power boats allowed on Gracie Lake....	Jansen	See section 6.1.4
...Fire management should be incorporated into the management plan. There should be no slash-burning. All fibre-logs should be utilized....	Jansen	See section 4.4.7
...Alder, cedar wastes along with sub-species should be offered to contractors and wood cutters....	Jansen	The Ministry of Forests does not tolerate the waste of marketable wood fibre. How fibre is recovered remains,the licensees choice.

Nahmint watershed review

Proposals and concerns drawn from transcripts of verbal presentations

Proposal or concern:	Respondent(s):	Action:
...No fibre should be exported out of the Nahmint or for that matter tree Farm License #44. All fibre should be processed in the Alberni region....	Gerard Jansen MLA Alberni Parliament Buildings Victoria, B.C. V8V 1X4	The type of timber predominant in the Nahmint is all processed at Port Alberni.
...Competing values include not only recreation, wildlife, and ecological but also (the) economy and infrastructure of single industry communities,...		The Nahmint Valley is managed in an integrated fashion in an effort to balance all needs.
...the process of dealing with these land use conflicts on valley by valley basis is a poor one.... ...A comprehensive land use plan for the central west coast of Vancouver Island is a much more realistic alternative.... ...on a sustainable basis which is on an 80-year rotation....	Jansen	This subject is beyond the mandate of the 1990 Review.
...It is not acceptable any longer to do continuous clearcuts.... ...So therefore smaller clearcuts such as 40 hectares and leaving the interspacing, large amount of forest in between old-growth forest...	Jansen	See sections 4.4.1 and 4.4.2
...a follow up committee is necessary...	Jansen	See section 4.8
...I think we could put the entire road network in,...	Jansen	See section 4.4.2
...you have no idea of how much old-growth is left and that inventory I think should have been completed many, many years ago....		See Appendix A-5
...The Bruntland Commission of course, has recommended that we save 12 per cent of the representative ecosystems and everybody has agreed to do that....	Jansen	This subject is beyond the mandate of the 1990 Review, but see sections 4.1.4, 4.2.5 4.3.5 and 4.10
...formalized social impact assessment being incorporated in our recommendation and in the total planning process to very closely look at how various resource development options might affect the community involved....	Jansen	See section 4.10
...I think a boat launching ramp should be put in because let's not forget ... that not all of us are young and capable of packing a 14 foot car top boat down to the lake by ourselves....	Jansen	See section 4.3

Proposal or concern:	Respondent(s):	Action:
...a public meeting should be held so that when this plan is complete and the green light is given so to speak for future harvesting, the public has a chance to look at that before it is finally implemented...	Gerard Jansen MLA Alberni Parliament Buildings Victoria, B.C. V8V 1X4	The Review Team concurs with this proposal.
...let the public have a chance to look and comment on the report before it is actually implemented...		The Review Team concurs with this proposal.
... that long-line logging, high lead or long-line machines, would be more beneficial than grapple-yarding.	Nick Boss 5668 Poplar Ave Port Alberni, BC	See section 4.4.3
... if it would destroy the creek, you do not log it. If you can log it properly and use directional-falling and it doesn't impact the fish, then there is no reason why we can't do it properly....	Boss	See section 4.1.4
...The very positive side of logging the area is that you will look after your greatest resource, your people. It will provide accessibility to the valley itself and it will enhance the wildlife...	Boss	See section 4.2.5
...I equally feel that road construction is very important to the Division. I believe that a main-line should be built to service most of the wood in the Nahmint Valley...	Boss	See section 4.4.2
...the ballast should not be pushed over the side and destroy an addition 200, 300, 400 feet below that cut. If there is to be any steep grade built the ballast should be trucked out and stored....	Boss	See section 6.1.5
...What we should do simply take smaller sections out allow a green-up period and then carry on....	Boss	See section 4.4.2
...In terms of rivers or the river I might add, and creeks surrounding it. Directional falling should be implemented around those creeks.......if there is going to be damage to the creek, where we cannot log properly it should be left....	Boss	See section 4.1.4
...if you take out a 2,000 foot setting and it depends again on the elevation and the steepness of the terrain, but if you take 2,000 feet of road frontage that should be a sufficient setting for logging...	Boss	See section 4.4.2

Nahmint watershed review

Proposals and concerns drawn from transcripts of verbal presentations

Proposal or concern:	Respondent(s):	Action:
...As part of the price for doing business the logging companies should put in recreation areas. These areas don't have to remain constant. After sixty-or-so years the area can be moved and the first area should be logged. This way we can have logging, a good economy, and recreation...	Jack McLeman Port Alberni, Site 127 c-31	See section 4.3.7
...Two alpine areas should be kept accessible for recreation, that's Mount Klitsa and Nahmint Mountain. There should be provision for organized campgrounds for people in campers etc. as well as wilderness camping....	McLeman	See section 4.3.5 and Appendix A-11
...I would like to repeat my opinion of the recreation facilities that which ever kind you decide on should not be in perpetuity but on 75-to 100-year cycle, except of course for the alpine areas around Mount Klitsa and Mount Nahmint... ... Set them aside for 75 to 100 years, but then have another spot that's growing up and you've got a 100 year old tree that's not too shabby and it's not a bad place and then you can go and log that section, but... ... example or a beach on the lake or perhaps a waterfall. You wouldn't move those, I guess you'd leave those in perpetuity....	McLeman	The first priority will be to establish recreation facility at appropriate sites in the valley to Ministry of Forests standards.
...of course, you never include in your logging your initial edge of the lakes and this sort of stuff you have to protect the lake and so on, but you should set aside areas for recreation now. The company has always put in, all the companies that know on the island, have always put in campsites....	McLeman	See section 4.1.4
...lets put some old-growth aside...	McLeman	See section 4.7
...wouldn't want a jet boat going by waterskiing...	McLeman	See section 6.1.4

Proposals and concerns drawn from transcripts of verbal presentations

Proposal or concern:	Respondent(s):	Action:
...So my ideal for the valley would be to actually have a residential community of people living there. Getting their living from logging it....	Guy Dauncy 2097 Windsor Rd Victoria B.C. V8S 3C2	This subject is beyond the mandate of the 1990 Review.
...I am concerned that this very review committee doesn't have other resource users sitting on it... ...the area lends itself to multiple-use and the multiple-users should be on the committee whether it is the wilderness users, the recreational users particular, should be represented so that they have say in it now...		Section 4.9
...There should be year-round multiple-use access to the area and not be closed off major parts of the time while logging in progress....	Dauncy	There is year round access to Nahmint Lake and that will be maintained except for periods of exceptional snowfall or extreme forest fire danger
...I recommend that there be a moratorium on any kind of logging until the committee has made it's recommendations...	Ms. Bernice Packford 152 Cambridge Victoria, B.C. V8V 4B3	Such a moratorium is beyond the mandate of the 1990 Review.
...So the concept of selective logging, community stewardship, couldn't be more timely than coming to the fore now.		See section 4.9 and 4.10
...The first point shoreline protection....	Norm Jackson 934 Selkirk Victoria, BC	See section 4.1.4
...Habitation protection is important....		See section 4.2.5
...I am not against logging but we have to do it in such a way that the environment is protected....	Jackson	See section 6.1
...The percentage of viable fibre below the road doesn't have to be removed.... ...The protection strip boundaries that are left along the streams have to be there and they are not being left....	Jackson	See sections 4.1.4 and 7.9 and Appendix A-2
...little creeks and riffles. They have to be protected. And why not start protecting that in the Nahmint?...	Jackson	
...What I was concerned about, I think more than anything was size of culverts and bridges and things like that. That's I guess to get specific that's what I am concerned about....	Jackson	See section 6.1.1 and appendix A-2

Nahmint watershed review

Proposals and concerns drawn from transcripts of verbal presentations

Proposal or concern:	Respondent(s):	Action:
...The Nahmint Valley could be used as a model to should how logging can be done through the decade and to the next century. It is hoped that landscape logging methods will be used extensively in the watershed and that the cuts will take place up and down the valley in different areas and at different times of years that it take to properly manage its watershed....	Rory Brown #44 444 Bruce Ave. Nanaimo, B.C.	See sections 4.3.2 and 4.3.3
...That buffer zones be established along main lines. The logging takes place behind...	Brown	See section 4.1.4 corridors of natural forest will be retained on all important water bodies, not along roads.
...When a road from one area comes close to the roads or roads from another area, such as valley to valley for example, these roads should be joined to allow 4-wheelers and other users easy access into the back country....	Brown	Public will be encouraged to review and comment on the Recreation Management Plan due for completion by December 1991. See section 4.6.7
...When it comes time to develop the campsites in the valley, it is hoped that an equal amount of non-vehicle sites and sites that will except RV's, truck, campers, and trailers will be built at the same time....	Brown	will be incorporated in Recreation Management Plan.
...it might be better to promote more of tenting, camping, hiking type campground than the RV type use....	Brown	will be incorporated in Recreation Management Plan.
...The logging basically enhanced my ability to guide. Makes for a lot more huntable animals.... ...I wouldn't like to see Nahmint Valley being logged some places where they take and they have two or three-mile clearcuts' cause the middle of the clearcut is not utilized as for food because animals have to have protection to get back to their,...	Wayne Wiebe Pacific Rim Guide Outfitters Box 1251 Station A Port Alberni, BC V9Y 7M1	See sections 4.2.5 and 4.4
...That there should be now a moratorium set up on clearcut logging, clearcut logging of the old-growth in that area until such time as the province wide inventory is completed by not just by the company involved but under strict supervision at least of the Ministry of Forests and the Ministry of Environment and Fisheries....	Alice Antonelli Arrowsmith Ecological Assoc. Box 179 Errington, BC V0R 1V0	Moratoriums on harvesting are beyond the mandate of the 1990 Review.

Nahmint watershed review

Proposals and concerns drawn from transcripts of verbal presentations

Proposal or concern:	Respondent(s):	Action:
...We could go to the beaches or to clearcuts and salvage the billions of board feet presently lying there...	Malcolm Robertson #5 639 Kennedy Street Nanaimo, BC V9R 2J9	Log salvage and minor product recovery operations are common activities in B.C.'s forests and along major waterways.
...It is just about an ideal example of an area which the development of which can be supervised by user representatives of user groups.... ...It is clear that you would want to have a representative from the forestry outfit. Mac & Bloe in this case. A representative from the IWA, a representative from the Ministry of Forests and or Environment, and a representative from the native side of the question, the indigenous people's side of the question. It is also vital to have at least three spaces for representatives of the public. One of those spaces would be for somebody who's like yourself, Mike,	Robertson	See section 4.8
...Who also wears a hat connecting that person to the Fish and Game Association and the third would be another informed citizen who is likely also a member of another group. There would be a number of ministries that would want to be, and organizations that would want to be kept informed with minutes and related documents and agendas without actually needing to be there at meetings. Meetings wouldn't have to be all that often. If we had this kind of a gathering four times a year with a little more lead time,	Robertson	
...names are not on the top of my head this morning and that is that we have a strong sense that there is a viable financial alternative to logging in that watershed and it is related to tourism and it is related	Robertson	
...to wilderness and related to wildlife, but we don't have the documents that show us the economic viability in the way that we have the documents that logging... ...I think that developing projections of income and jobs from non-logging uses that has got to be very very high on the agenda of, from now on, of this group and of any follow up group....	Robertson	See sections 4.1, 4.2 and 4.6
...if you make your small clearings approximately, having a maximum diameter of substantially less say an eighth of a mile then you've got lots of edge and you've got the little trails that works well for the animals, it works well for potential tourists use,...	Robertson	See section 4.4.2

Nahmint watershed review

Proposals and concerns drawn from transcripts of verbal presentations

Proposal or concern:	Respondent(s):	Action:
...have buffer road edge, you have buffer river edge, you have buffer cliff edge. A good rule of thumb is make the width of your buffer zone the height of your tall timber at that edge, so the river, there is the river, there is the minimum width of your buffer zone,...	Malcolm Robertson #5 639 Kennedy Street Nanaimo, BC V9R 2J9	See section 4.1.4 and 4.2.5
...I think that the costs of maintaining the infrastructure should be shared by the outfits that derive income from the whole zone....	Robertson	Beyond the Mandate of the 1990 Review the infrastructure (roads, bridges and similar works) are paid for from the value of the timber extracted from the area.
...connecting a trail system for example down the buffer zone and let's say from the Nahmint in the ocean right up to the perhaps Nahmint Mountain?...	Robertson	See section 4.3.7
...think nine times before you permit anything to go on into a buffer zone....	Robertson	See section 4.1.4
...Carefully planned road development of the valley is compatible with the concept of multiple use....	John Bassingthwaite Share Our Resources Port Alberni	See section 6.1
...A permanent set aside should be established in the vicinity of folio area 15. This reserve should include the beaches at the north end of the lake. The stand of boom-stick size fir adjacent to the beaches and the waterfall canyon complex along the Nahmint up stream of the beaches. It should be connected by a shore line set aside to folio area 11, Blacky's Cabin. Total area should not exceed 100 hectares....		See section 7.10
...An intensive silviculture program should be initiated in the watershed with the intent, of reducing the AAC loss,...	Bassingthwaite	See section 6.1.3
...commercial-thinnings in the older second growth...	Bassingthwaite	See section 4.4.1
...Logging area design location, size and visual impact should be based on Ministry of Forest Landscape Management Handbook...	Bassingthwaite	Specified in the Management and Working Plan for the Tree Farm Licence. See section 6.1.5
...Riparian areas should be protected by selectively logging the stream side management zone....	Bassingthwaite	See section 4.1.4
...folio area 6, should be selectively logged....	Bassingthwaite	See sections 4.1.4 and 7.6

Nahmint watershed review

Proposals and concerns drawn from transcripts of verbal presentations

Proposal or concern:	Respondent(s):	Action:
...Cut banks and fill-slopes should be hydro seeded on access roads to the Nahmint and those which are visible from the Lake...	John Bassingthwaite Share Our Resources Port Alberni	See section 6.1.5
...in 1990, an effort must be made to determine the recreational use of the watershed over the last 15 years...	Bassingthwaite	See section 4.3.5 and 4.3.7
...All recreational development should be funded by the government... ...work of wheeled access, campsites, and boat-launches should be established throughout the watershed with locations to be determined by the taskforce based on the recommendations of an independent consultant. A signing program should be initiated on forestry roads leading to the Nahmint, explaining the forest history of the area. A trail and trail head should be built to Mount Klitsa. The development of an industrial heritage site should be encouraged in railway-logged lower portions of the Nahmint...	Bassingthwaite	
...A procedure for annual follow-up to the eventual product of the taskforce should be established... ...The make-up of the follow up committee should be identical to that of the taskforce...	Bassingthwaite	See section 4.8
...The feasibility of the fish ladder on the lower Nahmint should be determined...	Bassingthwaite	See section 4.1.4
...the duties of the 1990 taskforce involve replicating the 1975 process... We're not opposed to the public being on the follow up committee...	Bassingthwaite	See section 4.9.2
...so the timing, if you have this kind of thing again as I think you probably will, if you could look at that more carefully I think the community would appreciate it...	Judith Hutchison Box 1087 Port Alberni	This comment related to the short lead-time between public notice and the date of some open house sessions. Two to three weeks lead-time will be attempted in future.
...group itself. We're not satisfied with the composition. We think it's weighed unfairly in terms of the big industry user, M & B...	Hutchison	The review team structure paralleled that of the original 1975 Nahmint Study Team. See section 4.9.2

Proposal or concern:	Respondent(s):	Action:
...I am sure a lot of people in the room are familiar with some of the concepts of new forestry. We would like to see if there is logging in the Nahmint that it be a real showcase for a whole new way of doing business... leave a lot of those green trees standing. Leave them live. You can come back and get them in another pass, with different rotation schedules or for seeds or whatever. Leave snags, leave those fallen trees the big ones on the ground that hold all that moisture. Think about fragmentation because when you have these huge cuts there's all the problems on the slopes and with the soil and so on, but if you start talking about little patches then you get the problem of fragmentation and what happens to the wildlife that are trying to live in a forest...	Judith Hutchison Box 1087 Port Alberni	See sections 4.1.4, 4.2.5 and 4.4.2
...if we actually take the Nahmint and use it as a starting point for a new kind of forestry then we can have a tourism economy much expanded...if you don't endhaul, you have created a terrific cost, than the one we have now. We can have logging jobs, we can have wilderness, but it takes proper planning so we've got to get all the resource users there.... ...That's why I was saying that a kind of logging where the industrial forest is looking a lot more like the old forest. So that you still can go in and do some scientific research you know....	Hutchison	See sections 4.10 and 6.1.4 See section 6.1.5
...whatever we do with the wood that we don't ship it out raw or cant it and ship it out that way. The wood that we do get, we get a lot more jobs out of it. Make a lot more things from it, you know, make pianos and so on and so on....	Hutchison	End product manufacture was beyond the mandate of the 1990 Review.

Proposal or concern:	Respondent(s):	Action:
...And then another thing we can do is start recycling.... ...I think MacMillan Bloedel, local government, the Ministry of Forests, and other interested parties, should provide and promote continued public education as Nahmint logging continues....	Wayne Deluca 5962 Brown Rd Port Alberni V9Y-7E8	See section 4.3.4
...The Management and Working Plan should be kept in the public eye this time because it is such an important opportunity when we've taken the time here from the various ministries represented and local politicians....	Deluca	Management and Working Plans are advertised and made available for public viewing prior to approval by the Chief Forester. The approved M.&W. P. is then available for public scrutiny at any time. The latest such plan for TFL 44 will be advertised for public review late in April 1991.
...To follow up on Mr. Mearns idea that the legitimate representatives of the working people who are affected when there is job loss should be on a committee....	Deluca	See sections 4.8 and 4.9
...In fact the logging activities have assisted the average member of the public to visit the valley and enjoy it's amenities in the past...	Mayor Gillian Trumper, City of Port Alberni	See section 4.3.4
.... We are pleased to see that all sectors of the public will have an opportunity to comment on the forest management plan's in the Nahmint basin and the many uses that the valley can be put to....	Gillian	See section 4.9
...As Judith tried to show. There has got to be committee involvement and we're not enemies, we're one community, we're a sharing community. So we shouldn't be having these horrible confrontations....	Sue Fraser 3715 South Morgan Crs. Port Alberni	See section 4.9

Appendix A.9

Nahmint watershed review

Proposals and concerns drawn from written presentations

Note: The complete transcripts of the presentations received at the open house sessions in August and September 1990, along with copies of each written submission received by the Review Team, are included in Volume II of this report.

Nahmint watershed review

Proposals and concerns drawn from written presentations

Proposal or concern:	Respondent(s):	Action:
I spent most of two days climbing and scrambling up an exceptionally beautiful streambed, a series of dramatic bowls and waterfalls framed by old-growth that is equal to the Johnston Canyon in Banff National Park, which many thousands of people visit each year.	Susan F. Karamessines RR#7, Duncan V9L 4W4	See section 4.3.7
...Where will I go to be on a wilderness lake?...	Karamessines	Information is available from the Ministry of Forests, Ministry of Parks, Parks Canada and many outdoor recreation groups throughout B.C.
...put in all or most of the proposed mainline logging roads as soon as possible rather than the normal situation of building roads as the harvesting proceeds....	Share Our Forests P.O. Box 197 Cobble Hill B.C. VOR 1LO	See section 4.4.2
...it would be appropriate for the public to contribute to paying for the increased road construction costs. This could be done through reduced stumpage fees or other incentives....	Share Our Forests	The value of authorized road construction is administered through the stumpage appraisal system.
...long line logging systems this could ultimately lead to less road construction in the long run.... ...more up hill yarding. Yarding up hill is safer method for the workers. With up hill harding "lift" is increased in most cases meaning more yarded logs clear the ground with less soil disturbance....	Share Our Forests	See section 4.4.3
...Share Our Forests would also like to see small cut blocks (30 Ha to 60 Ha) where possible. As well, a combination of short rotation second-growth harvesting (80 to 100 years) and long rotation (200 to 300 years) harvest combination....	Share Our Forests	See section 4.4.2
...Share Our Forests would like to see a set aside area in the Nahmint Valley limited to about 100 hectares containing a stand of Douglas Fir at the north end of the lake, with adjacent beaches and upstream canyon. As well we would like to see several campsites around the lake....	Share Our Forests	See section 4.3.8
...A 100 metre wide leave strip around the lake, where appropriate, should be included in harvest plans as well as consideration for "viewscapes" from heavy recreational use areas....	Share Our Forests	See sections 7.9 and 7.10

Nahmint watershed review

Proposals and concerns drawn from written presentations

Proposal or concern:	Respondent(s):	Action:
...lighter machinery or enforce types of logging which require less roadways such as high lead logging....	Sheelagh Salas Box 881 V8W 2R9	See section 4.4.3
...more independent woodlot operators....	Salas	This subject is outside the mandate of the 1990 review, but Ministry of Forests Policy supports the establishment of many new Woodlot Licenses in the province.
...the entire road system should be completed before any logging takes place.	Gerard Janssen MLA Alberni Victoria, B.C. V8V 1X4	See section 4.4.2
...if clear-cuts are the method used for harvesting, they should average 40 hectares and be interspaced by at least the same amount of old-growth....		See section 4.4.2
...Lakes, streams and rivers should have a leave strip left around them to protect the watercourse from siltation and provide shade for the marine life. It should also be noted that the large old-growth trees that are susceptible to being blown down in the leave strips be removed....	Janssen	See section 4.1.4
...Harvesting methods should utilize cable- systems and long-line rather than grapple-yarders. This would allow a minimum of roadwork....	Janssen	See section 4.4.3
...The roadwork should use excavators and involve no side-casting. All material should be end-hauled. Slope-stability must not be compromised for harvesting. If the slope is too steep it should not have roads and either long-line and heli-logging could be utilized. Snags and nesting sites must be identified so that our feathered friends are protected and have a chance to propagate....	Janssen	See section 6.1.1
...Recreation and wilderness sites should be established in all areas of the Nahmint Valley, i.e. wetland areas at the mouth of the Nahmint River where it enters and the Alberni Canal along the lake, in the upper reaches of the river and in the alpine area. These should include mainly wilderness sites, but at more heavily utilized areas such as the delta and lake, they should include latrines, garbage disposals and picnic tables to accommodate longer stays....	Janssen	See section 6.1.4

Proposal or concern:	Respondent(s):	Action:
....Logging should encompass viewscape harvesting, particularly around the lake so as to maximize recreation potential.	Gerard Janssen MLA Alberni Victoria, B.C. V8V 1X4	See section 6.1.5
...Log booms (should) be constructed and placed both at the inflow and outflow of the lake so as to minimize logging debris in the lake...		Naturally occurring logs and debris are a normal part of the lake and river ecosystem and should not be interfered with. Under normal practices, logging debris will not be allowed to enter the river or lake. Should an incident occur, it will be dealt with on a specific basis .
...Boating should be restricted to canoe, rubber raft or cartop boats and a power limited be placed on motors utilizing Nahmint Lake. There should be no power boats on Gracie Lake... ...Boat launching facilities and adequate parking for cars and trailers should be provided at the north end of Nahmint Lake....	Janssen	See sections 4.3.9 and 6.1.4
...Fire-management should be incorporated into the management plan and remain on-site with proper access to year-round water sources....	Janssen	See sections 4.4.7 and 6.1.2
...there should be no slash-burning....	Janssen	See section 4.4.8
...All fiber logged should be utilized; not just the species required in the processing plants operated by MacMillan Bloedel. Alder, cedar waste along with sub-species should be offered to contractors and woodcutters....		The Ministry of Forest does not tolerate avoidable waste of wood fibre.
...No fiber should be "exported" out of the Nahmint or, for that matter, TFL 44. All fiber should be processed in the Alberni region....	Janssen	This subject is beyond the mandate of the 1990 review, but the vast majority of the wood from Nahmint is processed in Port Alberni.
...If any restriction in harvesting is contemplated, both the company and the employees should be compensated. The time is past when licence-holders were compensated for loss of fiber-supply and workers were not....	Janssen	This subject is beyond the mandate of the 1990 review.
...the process of dealing with these land-use conflicts on a valley-by-valley basis is a poor one....	Janssen	This subject is beyond the mandate of the 1990 review.

Nahmint watershed review

Proposals and concerns drawn from written presentations

Proposal or concern:	Respondent(s):	Action:
...A comprehensive land-use plan for the central west coast of Vancouver Island is a much more realistic alternative....	Gerard Janssen MLA Alberni Victoria, B.C. V8V 1X4	
...logging with an eye to recreation is beneficial to all of us. All our recreation and all of our jobs....	Jack McLeman Site 127 c31 RR#1 Port Alberni, BC V9Y 7L5	The review team concurs with this view.
...The government agencies are progressively putting the Island on the UIC rolls one valley at a time. They don't seem to have the common sense to understand that you must look at the whole area as a total and access our job potential on that basis....		This subject is beyond the mandate of the 1990 review.
...no area of the Nahmint should be set aside in perpetuity... ...the logging companies should put in recreation areas. These areas don't have to remain constant. After 60 or so years the area can be moved and the first area should be logged....	Jack McLeman	The review team recommends some permanent deferrals and some long term deferrals. See sections 4.2.5, and 4.3.5 and 6.1.5
...Two Alpine areas should be kept accessible for recreation: - Mt.Klitsa and Nahmint Mountain....	Jack McLeman	See section 4.3.5
...There should be provision for organized camp grounds for people in campers etc. as well as wilderness camping. This should only be done, however, on a nonpermanent basis....	Jack McLeman	See section 4.3.7
...make it difficult for people to put high powered boats in the lake....	Jack McLeman	See sections 4.3.9 and 6.1.4
...the recreation facilities of whichever kind you decide on should not be in perpetuity, but on a 75-to 100-year cycle....	Jack McLeman	The immediate priority will be to complete planned recreation facilities to Ministry of Forests standards.

Proposal or concern:	Respondent(s):	Action:
...Our present paper mills are surely convertible to running on recycled paper....	Malcolm Robertson 5-639 Kennedy St. Nanaimo, BC V9R 2L9	This subject is beyond the mandate of the 1990 review. MacMillan Bloedel presently collects recycled newspapers at its Port Alberni pulpmill.
...Let the government remove the administrative roadblocks to smaller scale, healthy forestry....	Robertson	This subject is beyond the mandate of the 1990 review. The Ministry of Forests is committed to promoting a range of small, medium and large scale forest enterprises.
...Our society believes in the need for preserving special places but we also believe that their is already enough protected wilderness in the vicinity....	Share Our Resources 3416 4th Ave Port Alberni V9Y 4H2	The review team does not concur with this view. See section 4.3.5
...regional second growth stands have not reached maturity. Until they do, the role of old-growth timber is as important to local employment as it was in the past....		If adopted, the recommendations of the 1990 review will provide for conservation and preservation of natural old growth areas throughout the valley.
...The Nahmint contains 34 per cent of the remaining old-growth timber under Sproat's management. It is a vital component in the viability of the operation due to its winter logging opportunities. The Nahmint must be kept in the working forest to ensure the long term future of Sproat....	Share Our Resources	The recommendations in this report are intended to ensure viable harvesting operations over the long term.
...A permanent set aside should be established in the vicinity of folio area 15. This reserve should include the beaches at the north end of the lake, the stand of boomstick sized fir adjacent to the beaches and the waterfall, canyon complex along the Nahmint upstream of the beaches. It should be connected by a shore line set aside to Folio area 11 (Blackies Cabin). Total area should not exceed 100 Ha's. The land-base involved in this set-aside should be delineated on maps and the timber removed from TFL 44 AAC calculations....	Share Our Resources	See section 4.3.8
...Logging area design, location, size and visual impact should be based on the: • MOF Landscape Management Handbook • June 1/1990 MOF "Coastal Planning Harvest Guidelines"....	Share Our Resources	See section 4.3

Nahmint watershed review

Proposals and concerns drawn from written presentations

Proposal or concern:	Respondent(s):	Action:
...Riparian areas should be protected by selectively logging the "Streamside Management Zone". This zone should be as wide as possible on a site specific basis....	Share Our Resources 3416 4th Ave Port Alberni V9Y 4H2	No harvesting will be planned within Fisheries Protection Corridors. See section 4.1.4
...Folio areas that were previously designated as no logging (Folio Area 6) should be selectively logged....	Share Our Resources	See sections 4.1.4 and 7.0
...Cutbanks and fill slopes should be Hydroseeded on access roads to the Nahmint and those which are visible from the lake....	Share Our Resources	See 6.1.5
...A signing program should be initiated on Forestry roads leading to the Nahmint, explaining the Forest History of the area....	Share Our Resources	See sections 4.3.4 and 4.6.3.2
...A trail and trailhead should be built to Mt. Klitsa...	Share Our Resources	See section 4.3.5
...The development of an industrial heritage site should be encouraged in the railway-logged, lower portion of the Nahmint. This could involve erection of a display of renovated old-time logging equipment accompanied by an interpretive signing program....	Share Our Resources	See section 4.3.4
...A procedure for annual follow-up to the eventual product of the task force should be established. The results of these annual affairs should be made public in local newspapers. The makeup of the follow-up committee should be identical to that of the taskforce....	Share Our Resources	See section 4.8.1
...We believe that our forest and mineral resources should be managed using the best possible scientific techniques in order to provide a balance between environmental impact and economic reality....	R.S. Brown Four Wheel Drive Association of B.C. #44 444 Bruce Ave Nanaimo, BC V9R 5W5	
...Production roads can be used by a variety of recreational vehicles to access remote wilderness areas....		See section 6.1.2
...Disused trails of recreational importance can be left in a primitive state with basic drainage and bridge maintenance....	Brown	See section 6.1.1
...There are certain areas of our Province that because of unique environmental considerations, should remain free of the pressures of development. In such cases the Four Wheel Drive Association of B.C. will support the designation of these areas as wilderness reserves....	Brown	See section 4.3.5

Proposal or concern:	Respondent(s):	Action:
...The Nahmint Watershed is not an area that needs to be considered for a reserve....	R.S. Brown Four Wheel Drive Association of B.C. #44 444 Bruce Ave Nanaimo, BC V9R 5W5	
...To be sure, there are unique features that pertain to the valley but they have been addressed very well in the revised integrated resource study....		See section 4.1.4 and 4.3
...The Nahmint Valley could be used as a model to show how logging can be done through the decade and into the next century....	Brown	See section 4.10
...It is hoped that "landscape logging methods" will be used extensively in the watershed and that the cuts will take place up and down the valley....	Brown	See section 4.3 and 6.1.4
..That buffer zones be established along main lines. The logging takes place behind these zones and once the second-growth get firmly established these zones could then be logged....	Brown	See section 4.1.4 and 4.4.2
...When it comes time to develop the campsites in the valley, it is hoped that an equal amount of non-vehicle sites and sites that will accept RV's, truck campers and trailers will be built at the same time....	Brown	See section 4.3.7
... The Port Alberni City Council has been on record continuously as being in favor of "sustainable development" for British Columbia and we view the Nahmint Drainage Basin no differently....	City of Port Alberni Port Alberni, B.C.	
...In fact the logging activities have assisted the "average" member of the public to visit the valley and enjoy its amenities....	Port Alberni	See sections 4.3 and 6.1.4
...In 1975 the Nahmint Watershed Integrated Resources Study was completed and provided for a resource plan for all users including timber supply and addressing environmental concerns. this study was revised in 1979 and in 1989. We believe that these studies and plans are progressive and their application has shown that all users of our forests can have their needs satisfied in the Nahmint Drainage Basin....	Port Alberni	
...We are pleased to see that all sectors of the public will have an opportunity to comment on the forest management plans for the Nahmint Basin and the many uses the valley can be put to....	Port Alberni	See section 4.8

Nahmint watershed review

Proposals and concerns drawn from written presentations

Proposal or concern:	Respondent(s):	Action:
...It is our view that the method of development currently in use in the Nahmint Drainage Basin is evolving in an orderly and appropriate manner and should be continued....	City of Port Alberni Port Alberni, B.C.	See section 4.9
...viewscapes preserved as much as possible...	Neil Malbon General Delivery Tofino, B.C. V0R 2Z0	See sections 4.3.2 and 4.3.3 and 6.1.4
...road construction should not cause harm to any fisheries values or other resources...		See section 6.1.1
...creation of parks north end of Nahmint Lake and Beverly Lake - other areas if required...	Malbon	See section 4.3.5 and 4.3.8
...public access by vehicle/foot and boat implemented and expanded...	Malbon	See sections 4.3.9 and 6.1.2
...recreational use needs to be surveyed...	Malbon	See section 4.3.7
..."base plan on (actual) use, not supposed use"...	Malbon	See section 4.3.7
...we do not need large tracts set aside due to government knee-jerk reactions...	Malbon	See section 4.3.5
...We must preserve special places and at the same time maintain a viable working forest....	Malbon	See section 4.8 and 4.9
Should have direct consultations with the first peoples namely the Indian Natives that have owned and managed these areas.	Darrell Ross Land Claims Researcher Nuu-Chah-nulth Tribal Council	See section 4.8.1
...To protect the main stem of the Nahmint River, I would suggest a minimum 300 feet of unlogged timber on both sides of the river to be left in perpetuity,...	Joe Saysell Box 169 Lk Cowichan,B.C. V0R 2G0	See section 4.1.4
...along the lakeshore a minimum of 1000 ft....	Saysell	See sections 4.1.4 and 7.9
...Most of the logging that has taken place in the Nahmint Valley has been by grapple yarders thus requiring extensive road building.... ...long-line machines - could have gotten the job done without this extensive road building. Grapple-yarding is totally unacceptable and I would suggest that for future logging in the Nahmint Valley that only long-line machines be used....	Saysell	See section 4.4.3

Nahmint watershed review

Proposals and concerns drawn from written presentations

Proposal or concern:	Respondent(s):	Action:
...Smaller Clearcuts - Patch Logging or smaller clearcuts with large unlogged areas between each logged patch is the most beneficial to wildlife and causes the least environmental damage to our rivers....	Joe Saysell Box 169 Lk Cowichan,B.C. V0R 2G0	See section 4.4.2
...There should be more burning of this slash as it is great habitat for wildlife especially for blue grouse and deer after a slash-burn....	Saysell	See section 4.4.8
...all roads on steep, rocky terrain should be end-hauled and not side-cast over the bank as is evident in the past....	Saysell	See section 6.1.4
...Roads have been placed too close to the main stem of the valley (Nahmint River),...	Saysell	See section 4.1.4.1
...One last suggestion would be that a follow-up committee be established with more public input. the public should be part of the planning process and not be excluded from the committee except for attending public open houses or tours. Public involvement means exactly that, one of being on the team and not on the outside....	Saysell	See section 4.8
...The resume of the Land Base and biology of this watershed indicate an area where a round-table type of development of an Integrated Landuse program is highly appropriate. I refer to the 1975 version of the Nyberg study as a base for such a program....	Alice Antonelli Arrowsmith Ecological Assc. Box 179 Errington V0R 1V0	See section 4.9
...To allow logging to proceed in the watershed under a plan which has been unilaterally revised to "provide the licensee with operational flexibility" would, however, seem to contravene the chief Forester's 1975 objectives and to turn the Forest Service's statements on public input into mere lip-service....		See section 4.8
...we therefore recommend at the very least a return to the Nyberg study's original prescriptions and detailed strictures on such things as road construction, leave strips, steep-slope prohibitions, choice of equipment and size of clearcut, etc....	Antonelli	
...we would endorse changes in legislation if necessary to enable this sort of enlightened resource-use and management to be updated. This is a time of depleted resources and the need for a diversified economy, along with an increasingly broader, long-term vision of our use of forested land....	Antonelli	Legislative change is beyond the mandate of the 1990 review.

Nahmint watershed review

Proposals and concerns drawn from written presentations

Proposal or concern:	Respondent(s):	Action:
...The strictures and recommendations of the 1975 Integrated Resource study will require upgrading in the light of what we now know....	Alice Antonelli Arrowsmith Ecological Assc. Box 179 Errington V0R 1V0	Review team agrees. See section 4.9
...It is perhaps the Annual Allowable Cut levels which are no longer feasible and must be downgraded without further loss to and degradation of our land and resources....		Review of the Allowable Annual Cut is beyond the mandate of the 1990 review. AAC is reviewed in conjunction with the Management and Working Plan for the Tree Farm License as a whole.
...We've got to get away from the (boom and bust) industrial mentality of forest mining and liquidation for the production of relatively low-value products. We've got to get more jobs out of our wood and higher-value end-products. We've got to stabilize our boom and bust economy....	Brian Cyr 265 Pine St Nanaimo, BC V9R 2V7	This subject is beyond the mandate of the 1990 review.
...We must...manage... cut-over land and second growth stands much more intensively as the critical future resource that they are....	Cyr	See section 6.1.3
...I view the marketing of Alberni's fantastic recreational opportunities as a key to the the Valley's diversification....	Cyr	See section 4.6 and 6.5
...the Nahmint Valley with its major river, lakes, low elevation forests, and highlands make it one of the most valuable areas in Alberni in terms of providing a sustained yield for recreational resources....	Cyr	See sections 4.1.4, 4.2.5 and 4.3.5
...I would like to see harvesting take place over a 70-year period, much as Carmanah's Special Management area....	Cyr	The Nahmint does not have a separate rotation period. Sproat Lake Division operates on an 80 year rotation. See sections 4.4 and 7.9
...I think small opening as opposed to large progressive clear cuts are a good idea....	Cyr	See section 4.4.2
...I like the idea of hiking cover along the lakeshore. I would like to see this area set aside form harvesting to become of Forest Service Recreation Site....	Cyr	See section 7.9

Proposal or concern:	Respondent(s):	Action:
...and do some Habitat Assessment Planning. It is time to apply some educated guesses towards habitat management. I think areas 15, 17, and 18 have important winter habitats and should be looked at in terms of long-term harvesting deferrals or withdrawals with AAC adjustments....	Brian Cyr 265 Pine St Nanaimo, BC V9R 2V7	See section 4.9
...I am not satisfied with riparian zones in areas 17, 18 or around the foreshore of the lake. These areas need better care....	Cyr	See sections 6.0 and 7.0
...I would like to see a large area encompassing the height of land ridge top from Mt. Klitsa to Mt. Nahmint designated as wilderness. The lakes in the Mt. Gibson area and Beverly Lake should be included....	Cyr	See section 4.3.5
...I think the bog in area 15 and representative old-growth stand throughout the valley should be set aside in Ecological Reserves....	Cyr	See section 4.3.8 and 4.7.2
...Buffer-zones between all roads (secondary mainline) and the resulting logging operation....	Peter Bolten #12 3826 Anderson Ave Port Alberni V9Y 5B2	See section 4.4.2
...Buffer-zones along both sides of all waterways and tributaries (seasonal and permanent flows) of a size no less than the predominant height of surrounding trees...	Bolten	See section 4.1.4
...The non-logging of trees 10.5′(feet) in circumference, or leaving ten trees of the largest size, per hectare of cut...	Bolten	See section 4.9
...Leaving unlogged tracts of land of equal size adjacent to clearcut parcels, in perpetuity until complete rejuvenation is accomplished... ...As an alternative ... abandoning clearcuts in favor of strip logging with equal sized unlogged portions between cut zones, running vertical and perpendicular to the hillside vs. road-system...	Bolten	See section 4.4.2
...A no-cutting policy of all ridgelines and mountain-tops to help facilitate wildlife habitation, re-seeding, and prevention of erosion and flooding.... ...By leaving consistent uninterrupted buffer-zones and mountain-tops, industry wins, nature wins, and the people win....	Bolten	See sections 4.1.4 and 4.2.5

Nahmint watershed review

Proposals and concerns drawn from written presentations

Proposal or concern:	Respondent(s):	Action:
...we support cut-blocks of 10 hectares (25 acres) or less....	Wayne Zaccarelli Victoria Fish & Game Protective Assc. Box 93 Victoria	See sections 4.4.2 and 7.9
...Large scale progressive clear-cutting evident in the upper valley and above the lake toward the upper end can no longer be tolerated....		See section 4.4.2
...Because grapple-yarding requires excessive road construction with resultant loss of land base for both timber and wildlife production, this method of logging should be stopped....		See sections 4.4.3 and 7.9
..All logging in the Nahmint should be by tower and long-line carriage systems which minimize road construction. Selective-logging should be practiced in all sensitive areas....		
...We oppose the practice of exhausting, over the short term, any watershed's mature timber...	Victoria Fish & Game Protective	See sections 4.1.4, 4.2.5, 4.3.5 and 4.4.2
...Road construction techniques must be altered to eliminate the practice of side-casting blasted rock and overburden which damage and bury timber and soil....	Victoria Fish & Game Protective	See sections 6.1.1 and 6.1.4
...previous policy and practice has failed to protect recreational and tourism values associated with hiking, nature appreciation, et cetera. View protection from the lakeshore and riverbanks are key. The feeling of being within the forest must be retained and so one must be protected from the sight of the clearcut opening....	Victoria Fish & Game Protective	See sections 4.1.4, 4.3.2 and 4.3.3
...The burning of slash should be encouraged to improve wildlife habitat.... ...The use of fire as a tool to improve wildlife habitat is a common practice over much of the province and is consistent with multiple-use principles. ...small debris should be chipped for economic use, or chipped and scattered back on the land....	Victoria Fish & Game Protective	See section 4.4.8.2
...Relocate or cancel any existing cutting permits which include areas alongside the lake or any permanent streams....	Tom Loring, Ecologist 59 Moss St. Victoria V8V 4M1	See section 4.1.4
... Limit any clear-cuts to no more than 30 acres, with a least as much uncut area left between clear-cuts. Encourage the use of Selection or Shelterwood cutting systems; with mobile long-line yarders or low ground pressure small skidders required for all systems. Permit no cutting on hill or ridge tops and for 300 feet below the crest of any hill or ridge....		See section 4.4.2

Nahmint watershed review

Proposals and concerns drawn from written presentations

Proposal or concern:	Respondent(s):	Action:
... Require chipping of logging-slash along roads and fire breaks, but permit no slash-burning! This drainage is a natural funnel to spread slash fires...	Tom Loring, Ecologist 59 Moss St. Victoria V8V 4M1	See section 4.4.8
... Limit over width trucks to present access roads, provide reloads for out haul. Additional logging roads can be narrower for smaller trucks, and must be located to avoid likely slide areas and other sensitive spots. Side-cast and large rock cuts should not be permitted. All side roads must be drained and closed as soon as timber is hauled out....		See section 4.4.3 and 4.5
... To avoid possible shoreline damage by large motors and larger boats limit lake access to parking areas some distance from shore with launching sites for canoes and cartop boats only....	Tom Loring	See section 4.3.9
... Remove all gates on logging roads, and provide year long staffed registration/information stops on both upper and lower access roads. This is partly to control the volume of recreation traffic, but also to aid in case search and rescue is needed and to reduce littering....	Tom Loring	See section 6.5
... Require licensee to provide funds for repair of present riparian damage and possibly restocking of fish....	Tom Loring	See section 4.1.4
... Require licensee to post a performance bond equal to twice the stumpage value of the timber estimated to be removed from each cutting permit area. This is to assure that all terms of the Nahmint Management Plan are adhered to and that cleanup is done, roads put to bed, landings seeded at the proper time and reforestation provided for. Also, that wilderness and riparian zones are protected....	Tom Loring	Performance deposits on major licences such as T.F.L. 44 typically exceed $250,000 at all times. See section 4.1.4
... Riparian Zones of at least 1500 feet along the lake, 300 feet along creeks and 500 feet along both sides of the river, must be established and reserved from cutting....	Tom Loring	See section 4.1.4

RESOURCE MANAGEMENT

Gibson/Klitsa Plateau

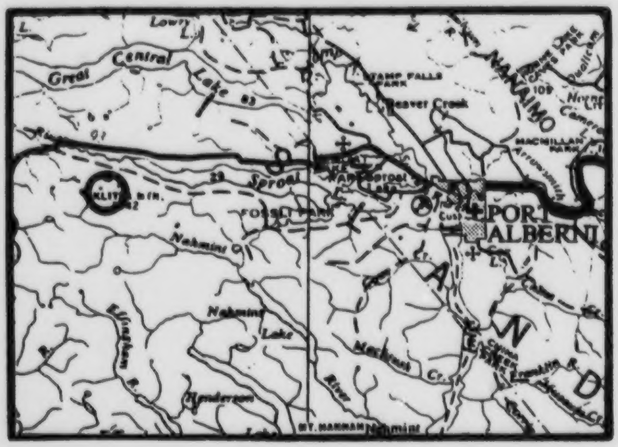
Proposed Wilderness Study Area

Area description and access

The Gibson/Klitsa Plateau is one of 59 areas proposed by the British Columbia Forest Service to be studied for *wilderness area* designation.

The centre of the proposed study area lies 31 kilometres east of Port Alberni in the Central Vancouver Island Mountain Range. It straddles the height of land between the Alberni-Tofino Highway corridor and the Nahmint Valley, and is about 6 000 hectares in size.

The area can be reached from an unimproved trail that begins a short distance off Highway 4 at the west end of Sproat Lake.

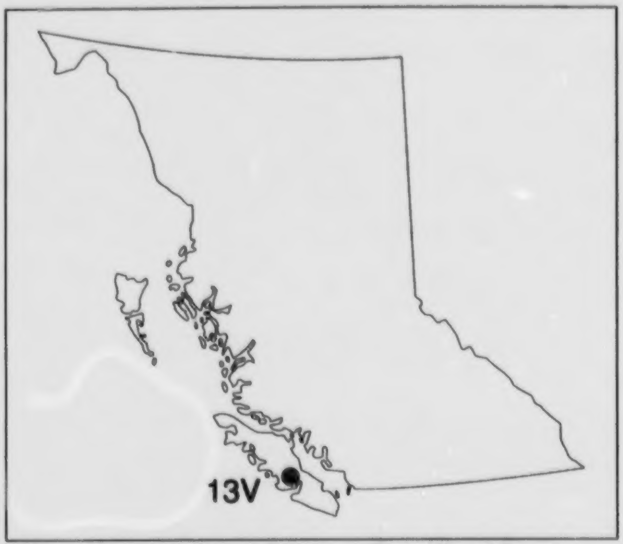


Gibson/Klitsa Plateau proposed study area *1:600,000*

Proposals

The Forest Service received proposals from the following organizations and agencies to designate the Gibson/Klitsa Plateau a *wilderness area*:

- MacMillan Bloedel Ltd. (Sproat Lake Division); and,
- Victoria Fish and Game Protective Association.



13V — Vancouver Forest Region — Port Alberni Forest District

Wilderness values

The Gibson/Klitsa Plateau is part of the most southerly subalpine wilderness remaining on Vancouver Island. Its varied topography, small lakes and subalpine forest provide a readily accessible wilderness experience.

■ Conservation

- **Landscapes:**
  - Mount Klitsa and Nahmint Mountain are regional landmarks visible from all parts of the Alberni Valley; and,
  - the subalpine plateau between Mount Klitsa and Mount Gibson has many scenic lakes and meadows.

Province of British Columbia
Ministry of Forests

- **Biological diversity:**
  - Roosevelt elk (transplanted) inhabit the upper reaches of the Nahmint Valley;
  - Willow grouse and white-tailed ptarmigan;
  - frequent alpine areas; and,
  - mountain hemlock and coastal hemlock biogeoclimatic zones are represented in the Leeward Island Mountains ecosection.

- **Special features**

The undeveloped wilderness and related opportunities are relatively close to a large urban population.

■ Recreation

The varied topography, small lakes, alpine meadows and subalpine forest which make up this area provide many opportunities for wilderness recreation, including:

- a 50-kilometre crescent of alpine ridges and plateaus, east of Nahmint Mountain to Gracie Lake, could provide many interlocking ridge-top trails;
- superb views of Sproat Lake, the Nahmint Valley and central Vancouver Island mountain peaks from Mount Klitsa; and,
- four lakes stocked with cutthroat trout.

The area is currently used for hiking, backpacking, wilderness camping and viewing, photography and fishing.

Other resource values/uses

- **Minerals/energy**

Mineral values are considered to be low and there are no active mining claims at present.

- **Timber**

Dispersed patches of mature timber occur throughout the proposed study area but are of low quality and volume. No timber harvesting is proposed.

- **Tourism**

Current recreational tourism is low. A trail-head tied into the Taylor River rest-stop would provide adventure tourism possibilities. Potential exists for heli-hiking and heli-skiing.

- **Fish/wildlife:**
  - transplanted Roosevelt elk use the upper Nahmint drainage;
  - four lakes are stocked with cutthroat trout; and,
  - Vancouver Island marmots may be present in alpine areas.

- **Trapping**

A registered trapline covers the Nahmint portion of the proposed study area.

Forest Service wilderness program

The Forest Service's wilderness program was established in response to the Wilderness Advisory Committee's recommendations for a wilderness mosaic. In 1987 the *Forest Act* was amended and three areas were designated. In 1989 a wilderness policy was approved.

Wilderness areas are among a range of designations that protect various natural resources in B.C. Our wilderness program is intended to complement the protected-area programs of other government and non-government organizations.

The goals of the program are:

- preserving natural landscapes;
- maintaining biological diversity;
- protecting special features; and,
- providing wilderness recreation opportunities.

Role of the public

The Forest Service is committed to public participation in the ongoing development of our wilderness program. In 1988 your involvement was requested to develop a wilderness policy through a public discussion paper. We now seek your advice on specific wilderness study area proposals at public information sessions.

If you have any comments or additional information for the proposed wilderness study area, please write to:

B.C. Forest Service
Port Alberni Forest District
4227 6th Street
Port Alberni, B.C.
V9Y 4N1

Review of Nahmint watershed integrated resource study

Objective

To review and update the Nahmint Folio Plan to include knowledge and information gained regarding integrated resources management practices since the original plan was completed in the mid 1970s, and to respond and reflect public concerns expressed at meetings and consultations between the study team and the public.

Terms of reference

- The Ministry of Forests will be the lead agency in the folio review and update process. The review team will be chaired by Mr. E. J. Beadle, Operations Manager of the Port Alberni Forest District.
- The purpose of the team is to review and update the existing plan, not to create a new plan. The team will address all aspects of Forest Land Management as it relates to the Nahmint Valley.
- The Review Team is to represent all agencies that participated in the original folio plan. In addition, the Ministry of Tourism, Ministry of Energy, Mines and Petroleum Resources and the Board of Trustees of the Alberni Clayoquot Regional District will be invited to participate on the Review Team.
- The public will be invited to make appointments in order to present briefs in conjunction with scheduled open house meetings. These meetings will take place in late August before recommendations are formulated. The open house meetings will be held at Port Alberni, Nanaimo and Victoria.
- Existing approved cutting permits will be honoured. There will be no stoppage of current approved harvesting or road building in the folio area.
- Folio review will emphasize inclusion of comprehensive landscape and recreation management strategies to current Ministry of Forest standards.
- The Review Team will reach decisions by consensus. Should an impasse occur, resolution will be sought by referring the matter to the appropriate senior levels of authority within each ministry involved. This process will follow the existing protocol established between the Ministries of Environment, Forests, and Department of Fisheries and Oceans for the resolution of resource planning problems.
- The updated folio and recommendations will be presented to the Regional Manager of the Vancouver Forest Region by October 15, 1990 (see the attached draft critical path schedule).
- All pertinent recommendations will be incorporated as amendments to the Management and Working Plan for Tree Farm Licence 44.
- The Review Team is specifically charged with making recommendations regarding the nature and mandate of an ongoing follow-up committee, to monitor implementation of the revised Nahmint Folio Plan.

Volume

2

NAHMINT WATERSHED REVIEW

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VOLUME II

NAHMINT REVIEW

1990

VOLUME II

INTRODUCTION

This publication is the companion to Volume I of the Nahmint Report 1990. Part one contains copies of all correspondence received by the Nahmint Review Team, pertaining to the integrated resource management of the Nahmint Valley. Part two includes transcripts from tape recordings made during presentations by members of the public at three open-house information sessions held in August and September 1990.

Selected comments drawn from the documents in this Volume have been included in Volume I.

To request a copy of the report, please contact:

Mr. Ernie Beadle
Operations Manager Forestry
Port Alberni Forest District
4227 Sixth Avenue
Port Alberni, British Columbia
V9Y 4N1

NAHMINT REPORT

1990

VOLUME II

PART ONE

orig.

Arrowsmith Ecological Association
Box 179, Errington, B.C. V0R 1V0
Forest Committee
per: Alice Antonelli

September 25 '90

E.J. Beadle
Operations Manager, Forestry
Port Alberni Forest District
4227 Sixth Avenue
Port Alberni, B.C.
VNY 4N1 Fax # 724-9261

re: NAHMINT WATERSHED REVIEW file 700-5 Nahmint

COMMENTS AND RECOMMENDATIONS for NAHMINT WATERSHED REVIEW
FROM FOREST COMMITTEE of ARROWSMITH ECOLOGICAL ASSOCIATION:

1. re: MOF's Resource Management sheet on the Nahmint Watershed:

a) As residents of Vancouver Island in the Port Alberni Forest District, and members of a broadly representative environmental group we wish to express our appreciation of this opportunity to speak to the Forest Service's review process through its technical team. We are confident that public participation will be helpful in your efforts to establish and implement environmentally and economically sustainable, integrated use of our resources.

b) The resumé of the Land Base and Biology of this watershed indicate an area where a round-table type of development of an Integrated Landuse program is highly appropriate, I refer to the 1975 version of the Nyberg study as a base for such a program. The study is one which showed the Forest

c) To allow logging to proceed in the watershed under a plan which has been unilaterally revised to "provide the licensee with operational flexibility" would, however, seem to contravene the Chief Forester's 1975 objectives and to turn the Forest Service's statements on public input into mere lip-service.

11. We therefore recommend at the very least a return to the Nyberg Study's original prescriptions and detailed strictures on such things as road construction, leave strips, steep-slope prohibitions, choice of equipment and size of clearcut, etc.

We would endorse changes in legislation if necessary to enable this sort of enlightened resource-use and management to be updated. This is a time of depleted resources and the need for a diversified economy, along with an increasingly broader, long-term vision of our use of forested land. The strictures and recommendations of the 1975 Integrated Resource study will require upgrading in the light of what we now know. It is perhaps the Annual Allowable Cut levels which are no longer feasible and must be down-graded without further loss to and degradation of our land and resources.

111. While the review process is on-going, we ask for a moratorium on logging in the Nahmint Watershed.

Alice Antonelli, for
Arrowsmith Ecological Association
Forest Committee.

AF Antonelli

Submission : Nahmint Lake + Valley ; Aug 14, '90

Dear Panel ;

As a recently departed member of a large city, and an attending member of Victoria's Fish + Game Society, I have seen the life-long evolution of the so-called "environmentalists".

And although much of my past work history revolved obout the Forest-Industry, I feel a certain obligation to help preserve some of our Forests.

By no means am I an environmental fanatic.

I believe in sharing our resources.

The Forests are a Finite piece of land, and the prevailing sentiment is that they have been squandered. If we lose what we have here, Humanity also loses it here.

Simple measures, that can still be implemented, include ...

① Buffer zones between all roads (secondary + mainline) and the resblting logging operation;

② Buffer zones along both sides of all waterways and tributaries (seasonal and permanent flows) of a size no less than the predominant height of surrounding trees;

③ The non-logging of trees 10.5' (Feet) in circumferance, or leaving 10 (ten) trees of the largest size, per. hectare of cut;

④ Leaving unlogged tracts of land of equal size adjacent to clearcut parcels, in perpetuity until complete rejuvenation is accomplished;

.../2

⑤ As an alternative to #4, abandoning clearcuts in favour of strip logging with equal sized unlogged portions between cut zones, running verticle and perpendicular to the hillside vs road-system,

⑥ A no-cutting policy of all ridgelines a mountain-tops to help facilitate wildlife habitation, re-seeding, and prevention of erosion and flooding.

Sharing the forests means not only to provide sustainable yields of wood-products, but also provides sustainable yields of wildlife and Flora.

If you can imagine hillsides logged in the above-mentioned fashion, you can picture a hillside and ecosystem that retains life, and is a marvel to behold by all the Public.

Any resulting blow-down by wind is negligible, and is nature's way of returning nutrient capital back into the soil, and provides alternate snow-pack retention.

Local economic concerns can be best adressed by confronting the advent of automation and raw-log exports; and diverting technology to utilize a minimum of 40% recycling paper-products with provided training for current employees.

Despite my efforts and qualifications, the shrinking workforce in the woodworking industry has stymied my efforts to return to this employment. In my opinion, automation

.../3

is now the largest factor concerning unemployment in the forest industry.

In closing I re-emphasize that these recommendations are the conservative and benign sides to the controversy facing us, and must be seriously considered and implemented.

Do not make decisions based on the dollar.

When people see denuded miles of hillsider, and stripped waterways and valleys, they automatically sceeam rape, and for good reasons.

By leaving consistant, uninterupted buffer zones and mountain-tops, very little is compromised, and the Forest Industry wins, nature wins, and the People win.

Compromise and share.

The anger is there, and it won't take much to lose control.

These aforementioned measures can be realistically implemented, even if it means sparing 24% - 30% of the Nahmint Habitat.

Sincerely Peter Bolten

#12 - 3826 Anderson Ave
Port Alberni, B.C.
V9Y 5B2.

or 1097 Marchant Rd
Brentwood Bay, B.C.
V0S - 1A0.

[redacted]

I hope that the values of sustainable harvesting techniques are attained, so that the survivability of Port Alberni continues.

As indicated in my previous submission, a minimum amount of 24 - 30% forest coverage along primary and secondary waterways, (seasonal and permament flows) and retention of mountain-top and ridge line growth would add immeasureably to the resource value of our forests, and may even silence many preservationists and native groups.

Combined with this philosophy a policy of leaving behind (unlogged) 10 - 12 large trees per hectare, and several standing "snags", one will also attain sustainable yields of Fauna + Flora, and soil retention.

Thankyou, Sincerely

Peter Bolten ; File 500-5

BCWF
B.C. Wildlife Federation

SEP 2 1990
PORT ALBERNI
DISTRICT OFFICE

Joe Saysell,
Box 169, Lake Cowichan,
VOR2GO,
Sept. 24, 1990.

Mr. E.J. Beadle,
Chairman Nahmint Watershed Review Team.

Dear Sir:

After looking at the logging that had taken place in the Nahmint Valley by MacBlo since the 1975 Nahmint Watershed Integrated Resource Study, I have some suggestions to the Review team which might help in the future.

1. Buffer Strips along the Rivers and Lake- In some areas logging has been allowed to take place almost right up to the river bank or along the lake and this is not acceptable. To protect the main stem of the Nahmint River, I would suggest a minimum 300 feet of unlogged timber on both sides of the river to be left in perpetuity, and along the lakeshore a minimum of 1000 ft. of unlogged timber should be left. This of course is to protect the fishery values from erosion or runoff caused by logging at the same time as being aesthetically pleasing for hiking or fishing.

2. Harvesting Methods- Most of the logging that has taken place in the Nahmint Valley has been by grapple yarders thus requiring extensive road building. This road building is one of the main reasons for erosion or soil loss for the future and is very unnecessary in light of the fact that proper machines- long line machines- could have gotten the job done without this extensive road building. Grapple yarding is totally unacceptable and I would suggest that for future logging in the Nahmint Valley that only long line machines be used.

3. Smaller Clearcuts- Patch Logging or smaller clearcuts with large unlogged areas between each logged patch is the most beneficial to wildlife and causes the least environmental damage to our rivers. It is also the most aesthetically pleasing, if clearcuts can be aesthetically pleasing at all!

4. Slash Burning- Many of the logged areas in the Nahmint Valley have been made up of mostly hemlock, balsam, and cedar and have not had the slash burned. There should be more burning of this slash as it is great habitat for wildlife especially for blue grouse and deer after a slash burn. If done right, in the Spring instead of the Fall, slash burning does not hurt the soil and is beneficial to the well being of our forests.

5. End Hauling of Roads- All roads on steep, rocky terrain should be end hauled and not side cast over the bank as is evident in the past.

BCWF
B.C. Wildlife Federation

6. Road Engineering- The system of roads in the Nahmint seem to have been engineered strictly for benefitting logging economies first and the environment second. Roads have been placed too close to the main stem of the valley (Nahmint River), whereas greater care to the environment should be taken in the future.

One last suggestion would be that a follow-up committee be established with more public imput. The public should be part of the planning process and not be excluded from the committee except for attending public open houses or tours. Public involvement means exactly that, one of being on the team and not on the outside. Since this is public land that the forest companies are logging, then if they are having the say in how things are done then the public should have an equal say as how things are done on their own land, otherwise any other process becomes just "window dressing". This way the company should be made to follow the recommendations of the Review team and not just do things as they see fit. If the Ministry of Forests talks about integrated management and public involvement on public land, then that is exactly what it should be. Anything less is unsatisfactory.

Yours Sincerely,

Joe Saysell- Forestry Chairman
Vancouver Island Region of the B.C.W.F.

C/C Claude Richmond- Minister of Forests
C/C Dan Miller- N.D.P. Opposition Forest Critic
C/C Steelhead Society of B.C.

Rory Brown
#44 - 444 Bruce Ave.
Nanaimo , B.C.
V9R 5W5

NAHMINT WATERSHED

When one thinks of jobs in the forest industry , one usually thinks of the logger , the sawmill or pulpmill worker , and others that work close to the industry. It is sometimes easy to forget about all the other jobs that are directly or indirectly affected by the prosperity,or lack of it,in the forest industry.

My job is a construction electrician and in that position over the last two years I worked on projects at pulp mills. These projects lasted about 14 months. The rest of the time was spent working on projects that resulted from expansion at various mills. At my hiring hall - which covers Vancouver Island - 200 man years of work was done over each of the past two years working directly on projects involving the forest industry and a further 200 man years of work per year was done on projects that where an indirect result of the forest industry.

As you know, the 90's have dawned with an unprecedented growth in the awareness of the environment. This is very good but by the same token our resource based economy cannot be turned off like a light switch and everybody become tourist traps. When decisions are made that effect the job gain or loss in the forest industry its like throwing a stone into a pond, sooner or later everybody feels the results.

Thank you.

RBrown

R.S. Brown
A concerned citizen.

RECEIVED
MIN. OF FORESTS
OCT 1 - 1990
PORT ALBERNI
DISTRICT OFFICE

265 Pine Street
Nanaimo, BC
V9R 2V7
September 30, 1990

BC Forest Service Nahmint
  Watershed Review Panel
C/O Ernie Beadle, Operations Manager
Port Alberni Forest District

Attention: Mr. Ernie Beadle

Ladies and Gentlemen:

Thank you for the public meetings and the opportunity to address integrated resource management issues as they relate to the Nahmint Valley and TFL 44.

I was born in Alberni in 1963 and some of my earliest memories include hiking into Nahmint from Gracie Lake and sport fishing in Nahmint Bay. I graduated from ADSS in 1981 and enjoyed mill jobs at APD and Alpulp. With the layoffs and economic downturn of the early 80's, I was employed on a government grant trail building at Father & Son and Labour Day Lakes. I then travelled to Malaspina College where I enrolled in the two-year Forest Resources Tech. program followed by the two-year Greenhouse/Horticulture program. With my background, experience and education, I have a modest grasp of the present industrial structure of this Alberni Valley and M & B's TFL 44.

I am presently involved in market gardening of organic produce and derive much of my yearly income from part-time and seasonal endeavors. Some of my income is generated in and around TFL 44 as small scale forest related activities including gathering salal and ornamental brush, ferns, boughs, herbs, berries, wild mushrooms, firewood, and soil building materials.

I like to compare the organic agriculture formula to the industrial agribusiness formula. Organic growers produce a quality product sustainability with no hidden costs, and market it for a fair profit. Industrial agribusiness survives by producing huge volumes of a product cheaply and by undercutting the competition by a few percent.

We've got to get away from the (boom and bust) industrial mentality of forest mining and liquidation for the production of relatively low value products. We've got to get more jobs out of our wood and higher value end products. We've got to stabilize our boom and bust economy.

The future is in more of an organic gardeners approach of actually intensively working with the land base to nurture and grow crops which are marketed as a finished high value product. We must start managing our cut-over land and second growth stand much more intensively as the critical future resource that they are. I know we can get more employment, more productivity, more community stability, and still enjoy a quality standard of living along with a profoundly beautiful environment.

With Barclay Sound, the West Coast, Strathcona, and our forested lands, I view the marketizing of Alberni's fantastic recreational opportunities as a key to the Valley's diversification. The Nahmint Valley with its major river, lakes, low elevation forests, and highlands make it one of the most valuable areas in Alberni in terms of providing a sustained yield for recreational resources. To move from short-term horizons like advertising "Super Natural BC" to long-term management strategies will require more government supervision. It is promising to see many government ministries working together on the Nahmint Review.

Here was my suggestions towards making Nahmint a test case for acceptable resources use and timber harvesting. I like the idea of holding the old growth natural forest as a performance bond and buffer against the fall down effect. I would like to see harvesting take place over a 70 year period, much as Carmanah's Special Management area. I think small opening as opposed to large progressive clear cuts are a good idea.

Let's set aside some forest for recreation. As an avid hiker, I rate Nahmint's potential for forest recreation as exceptional. I like the idea of liking folio sites 10 and 11 with a strip of continuous forest cover along the lakeshore. I would like to see this area set aside from harvesting to become of Forest

Service Recreation Site. I think the removal of this area should involve reductions in the regions AAC.

Let's set aside some habitat for wildlife. I think we should use our knowledge gained through the IWIFR project and do some Habitat Assessment Planning. It is time to apply some educated guesses towards habitat management. I think areas 15, 17, and 18 have important winter habitats and should be looked at in terms of long-term harvesting deferrals or withdrawals with AAC adjustments.

Let's get serious about stream side management. I am not satisfied with riparian zones in areas 17, 18 or around the foreshore of the lake. These areas need better care.

Let's get serious about the proposed management of wilderness areas. I would like to see a large area encompassing the height of land ridge top from Mt. Klitsa to Mt. Nahmint designated as wilderness. The lakes in the Mt. Gibson area and Beverly Lake should be included. This wilderness proposal needn't entail large withdrawals from the regions AAC as a lot of this land is forested rock of low productivity with low timber values.

I think the bog in area 15 and representative old growth stand throughout the valley should be set aside in Ecological Reserves.

I look forward to seeing the updated Nahmint plan. If you have any questions regarding my submission, please contact me at 753-2050.

Yours sincerely,

Brian Cyr

Brian Cyr

April 22, 1990

To whom it may conern:

The "Camp" and "Environs" known by many including public journalists, and many other public authorities forestry, water rights etc. as " Blackie's Nahmint Lake Camp " was first started from scratch, (no previous evidence of earlier camp activities) by the undersigned, in May of 1960 and with help of many of my associates and friends became a well known and used wilderness camp. Some persons misused it, stole from it, hurt and injured some of it's common shelters and accomodations. It was never locked !! It always gave warmth and shelter to those who visited there. Some of it's friends and benefactors were Provincal Government Waterights, Provincal Forestry Personal, Department Of Transport persons, timber surveyors, Mac Millan Blodel employees, surveyors, and executives, fire security patrollers etc. plus literally hundreds, yes thousands in my thirty years of knowledge of " Blackies Nahmint Wilderness Camp ". It was declared a " preserved site " in the Nahmint Valley Lake Study " which of some years back late 1970's I believe, at which time I recieved a personal copy of the study which showed or recomended that my " Cabin " quote " as noted in section G of the map will be retained" while it indicated that several other cabins would be destroyed. At this time (report) I was unaware of the existance of three other cabins, some of which had been built by logs cut from the forest, Blackies was not, it was "shook" of "shaked" from fallen trees mostly cedar. That blew off the mountain that surround the lake. I recall in company with my friend of long standing Hugh Thomas, then chief engineer and supervisor of Provincal Government of B.C. Aviation branch at Patricia Bay Airport. Many years ago 1960's we climbed up the mountain behind and above the cabin into trees that were so giant in size that in our amazement, and being unusually impressed with the gigantic size of several furs exceding 8' inch diameter, and a mountain of shed bark at it's feet Hugh said to me " Just imagine, this tree was likley here when Columbus found this continent in 1492" yes we were standing in the majesty of the Gods !! Many times after that I climbed that creek bed, past the waterfall which can be heard from the cabin after one of Her (Nahmint) downpours yes it is a wonderful spot and could or should be left alone from " Man's careless and sometimes inconsiderate ways." I am not to be mistaken by my foregoing remarks as a Greenpeacer if thats what one may tagged - NEVER!!!

I have been ashamed so many times in my lifetime by their being formed in Vancouver B.C. !!! Being close to nature and enjoying her and helping others to see her wonders was always my aim. Never once a fire, in the vicinity of Blackies Camp destroy nature. " May man protect - what man did not create - and let him help others to see and appreciate (not enjoy) her wonders "

"BLACKIE"

The lake is five and three-quarter miles long, up to two-thirds mile wide. It is four hundred feet deep (measured) is classified as a glacial lake. Average rainfall exceeds two hundred and seventy-five inches per year. I have wittnessed this (trapped out the lake) rise twelve feet in fourty-eight hours in one of our West Coast Storms. It is surrounded by mountains approximately thirty-five feet.

I have enjoyed typing this letter for Blackie if it was not for him and all his deep appreciation for nature I might have never seen this wonderful place on the Island where I have lived all my life and may self and others help this "Camp" alive and well.

Barry Schaefer

CITY OF PORT ALBERNI

COMMENTS ON THE NAHMINT DRAINAGE BASIN

The Council of the City of Port Alberni who are the duly elected representatives of all citizens of the City of Port Alberni are pleased to have an opportunity to present their views on what the future of the Nahmint Drainage Basin should be.

The Port Alberni City Council has been on record continuously as being in favour of "sustainable development" for British Columbia and we view the Nahmint Drainage Basin no differently. Currently the Drainage Basin has had a history of logging and recreation use. In fact the logging activities have assisted the "average" member of the public to visit the valley and enjoy its amenities.

There are those members of the public who keep bringing the message to government and anyone else that will listen, that we should cease logging in any drainage basin or other area that is under discussion at that time. The Council of the City of Port Alberni believes this to be an extremely short-sighted approach and makes no more sense than telling farmers they cannot grow crops on farmland or telling orchardists that they should not remove over-age trees and replace them with new ones. This is not to say that parks are not necessary and Council has gone on record repeatedly as supporting the efforts to preserve and enhance Cathedral Grove Park and Pacific Rim National Park. As an aside we would point out that if it were not for logging activities in this area the only persons that could visit Pacific Rim Park would be those that wished to take a sea voyage to get there. Historically very few people have done so.

The Nahmint Valley is 22 miles long running from the Mount Klitsa area through Nahmint Lake and into the Alberni Inlet. The valley contains approximately 13,000 hectares of old growth forest. In 1975 the Nahmint Watershed Integretated Resources Study was completed and provided for a resource plan for all users including timber supply and addressing environmental concerns. This study was revised in 1979 and in 1989. We believe the these studies and plans are progressive and their application has shown that all users of our forests can have their needs satisfied in the Nahmint Drainage Basin.

We are pleased to see that all sectors of the public will have an opportunity to comment on the forest management plans for the Nahmint Basin and the many uses the valley can be put to. It is our view that the method of development currently in use in the Nahmint Drainage Basin is evolving in an orderly and appropriate manner and should be continued.

In conclusion, we would thank you once again for the opportunity to present our views on the devlopment of the Nahmint Basin. We are confident that you will listen to the people who live with the forests and work with them year after year and whose livelihood depends on sustaining them and not destroying them. City Council of Port Alberni believe that all users of the forests such as the Nahmint Basin can have their needs satisfied without resorting to "clearcutting" any more large areas from sustainable development, and protecting the environment.

Gillian Trumper

The FEDERATION of
MOUNTAIN CLUBS
of British Columbia

March 27, 1991

Mr. Ernie Beadle
Chairman
Nahmint Watershed Plan Review
Port Alberni Forest District
Ministry of Forests
4227 Sixth Avenue
Port Alberni, BC
V9Y 4N1

Dear Mr. Beadle:

Re: Nahmint Watershed Plan Review Update

Thank you for your letter of March 19, 1991 advising that the draft report of the Nahmint Review should be available in early April.

As we discussed February 28th, the Federation of Mountain Clubs would like to review the report and be more active in the planning process. A direct mailing of the report to our members as listed on the attached sheet would be appreciated.

Please call me at 752-2518 should you wish to discuss my request further.

ENT. ON 2297P.
✓91-04-03
MB

Yours truly,

JWigmore
Judy Wigmore
Regional Director

cc: J. Rutter, FMCBC

Attachment

File: /jwbeadle

RECEIVED
APR - 3 1991
PORT AL.
DISTRICT OFFICE

336 – 1367 West Broadway, Vancouver, British Columbia V6H 4A9 Telephone: (604) 737-3053

The FEDERATION of
MOUNTAIN CLUBS
of British Columbia

VANCOUVER ISLAND CLUBS

A. DELEGATES

ALBERNI VALLEY OUTDOOR CLUB
Al Greenhalgh
RR 3, Site 335, C-8
Port Alberni, BC V9Y 7L7
Phone: 724-0788 h

ALPINE CLUB OF CANADA -
VANCOUVER ISLAND SECTION
Margaret Brown
328 Stewart Avenue
Victoria, BC V9B 1R8
Phone: 727-2480 h

COMOX DISTRICT
MOUNTAINEERING CLUB
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Courtenay, BC V9N 7P2
Phone: 336-2130 h

HEATHENS
Chris Barner
102 - 644 Fourth Avenue
Campbell River, BC V9W 3W9
Phone: 287-4611 h

ISLAND MOUNTAIN RAMBLERS
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OUTDOOR CLUB OF VICTORIA
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OUTDOOR CLUB OF VICTORIA
TRAILS INFORMATION SOCIETY
Susan Lawrence
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Phone: 384-4748 h

B. FMCBC EXECUTIVE

Jim Rutter
Executive Director, FMCBC
336, 1367 West Broadway
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Phone: 737-3053 w

Judy Wigmore, Regional Director
1040 Koen Road
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Qualicum Beach, BC V0R 2T0
Phone: 752-2518 h

C. INFORMATION COPY

Syd Watts
ACC - Vancouver Island Section
RR 4, 6771 Bell-McKinnon Road
Duncan, BC V9L 3W8
Phone: 746-5768 h

1991-03-27
File: jw/islddel2

Four Wheel Drive Association of British Columbia
P.O. Box 284, Surrey, B.C. V3T 4W8

R.S.Brown
#44 444 Bruce Ave.
Nanaimo, B.C.
V9R 5W5

Sept. 9,1990

Mr. E. J. Beadle;

As an introduction , I think a short history of the Four Wheel Drive Association of British Columbia is in order. The FWDABC was formed in the early 1970's by a group of four wheel drive enthusiasts who where primarily interested in racing. From these humble beginnings the FWDABC has grown into an organization that represents the interests of four wheelers in all facets of our sport. We educate four wheelers in the proper use of their vehicle and promote a respect for the environment.

The FWDABC supports the "multiple use" concept for management of our Provincial resources.

In British Columbia many jobs depend on the development and use of our natural resources. The economic growth and our standard of living in this Province is directly related to the growth of our forest and mining industries.

We use and enjoy our recreational vehicles - two wheel drive and four wheel drive - in the pursuit of many outdoor activities: hiking, cross country skiing, snow mobiling, photography, hunting and fishing. Our vehicles take us and our families into the wilderness for the sheer pleasure of being there.

We believe that our forest and mineral resources should be managed using the best possible scientific techniques in order to provide a balance between environmental impact and economic reality.

Four Wheel Drive Association of British Columbia
P.O. Box 284, Surrey, B.C. V3T 4W8

Areas opened up by our resource industries can provide recreation for all. Production roads can be used by a variety of recreational vehicles to access remote wilderness areas. Disused trails of recreational importance can be left in a primitive state with basic drainage and bridge maintenance. This will allow continued use by off-roaders as well as providing essential fire access.

Hunting, fishing, and general sightseeing are activities enjoyed by the young and old, the athletic and disabled, the individual and family. Invariably, some type of four wheeled vehicle is used to access that favorite hunting or fishing retreat. Without the use of the roads and trails, these popular activities would be severely curtailed. If overcrowding of our fish, game, and outdoor areas occurs we can regulate access or reduce the take of fish and game in the best interests of conservation.

There are certain areas of our Province that because of unique environmental considerations, should remain free of the pressures of development. In such cases the FWDABC will support the designation of these areas as wilderness reserves.

The Nahmint Watershed is not an area that needs to be considered for a reserve. To be sure, there are unique features that pertain to the valley but they have been addressed very well in the revised integrated resource study.

As an avid four wheeler I have traveled the Island quite extensively and have seen both the very best and the very worst in logging practices. The trend now is toward a more environmentaly sound use of our forests and the FWDABC welcomes this change.

Four Wheel Drive Association of
British Columbia
P.O. Box 284, Surrey, B.C. V3T 4W8

The image of the logger and the use of the forests has been hurt by the media's and other's continual use of pictures of what could be called the Bald Mountain syndrome. The Nahmint valley could be used as a model to show how logging can be done through the decade and into the next century. It is hoped that "Landscape logging methods" will be used extensively in the watershed and that the cuts will take place up and down the valley. IN different areas and at different times of the years that it will take to properly manage this watershed.

The FWDABC has three recommendations that we would like you to consider;

(1) That buffer zones be established along main lines. The logging takes place behind these zones and once the second growth get firmly established these zones could then be logged.

(2) When a road from one area comes close to the road or roads from another area- such as valley to valley for example - these roads would be joined to allow four wheelers and other users easier access into the back country. It might also prevent other persons from pushing their own road through.

(3) When it comes time to develop the campsites in the valley, it is hoped that an equal amount of nonvehicle sites and sites that will accept RV's , truck campers and trailers will be built at the same time.

It is the position of the FWDABC that the plan be implemented after due consideration of the above recommendations.

THANK YOU.

RBrown.

Rory S. Brown
Region 1 Vice President FWDABC
President Nanaimo Sidewinders
4X4 Club

RESOURCE MANAGEMENT OF THE NAHMINT WATERSHED

SUBMISSION TO:

The Port Alberni Forest District
4227 6th Avenue
Port Alberni, B.C.
V9Y 4N1

SUBMITTED BY:

Gerard Janssen, MLA
Alberni
Legislative Buildings
Victoria, B.C.
V8V 1X4

August 24, 1990

The harvesting of the Nahmint Valley, a 36-kilometre long watershed covering 20,000 hectares, has been a contentious issue in the land use plan for TFL 44 which itself encompasses 1.1 M acres, is valued at approximately $40B and supplies economic benefits for the Alberni region.

Due to the increasing awareness of our environment, great care and caution must take place in the harvesting process. I believe the harvesting of the Nahmint Valley can become a showcase of new environmentally sound logging systems.

First, the entire road system should be completed before any logging takes place. This would ensure that the harvesting could take place throughout the valley in accordance with weather conditions and the life cycle of the species that live there. In the past, progressive logging has taken place as the roads continued up or down a valley at the expense of all other values.

Second, if clear-cuts ~~is~~ are the method used for harvesting, it should average 40 hectares and be interspaced by at least the same amount of old growth.

Lakes, streams and rivers should have a leave strip left around them to protect the watercourse from siltation and provide shade for the marine life. It should also be noted that the large old growth trees that are susceptible to being blown down in the leave strips be removed.

Harvesting methods should utilize cable systems and longline rather than grapple yarders. This would allow a minimum of roadwork.

The roadwork should use excavators and involve no sidecasting. All material should be endhauled. Slope stability must not be compromised for harvesting. If the slope is too steep it should not have roads and either longline and heli-logging could be utilized.

Snags and nesting sites must be identified so that our feathered friends are protected and have a chance to propogate.

Recreation and wilderness sites should be established in all areas of the Nahmint Valley, i.e. wetland areas at the mouth of Nahmint River where it enters and the Alberni Canal along the lake, in the upper reaches of the river and in the alpine area. These should include mainly wilderness sites, but at more heavily utilized areas such as the delta and lake, they should include latrines, garbage disposals and picnic tables to accommodate longer stays.

Logging should encompass viewscape harvesting, particularly around the lake so as to maximize recreation potential.

Log booms be constructed and placed both at the inflow and outflow of the lake so as to minimize logging debris in the lake.

Boating should be restricted to canoe, rubber raft or cartop boats and a power limited be placed on motors utilizing Nahmint Lake. There should be no power boats on Gracie Lake.

Boat launching facilities and adequate parking for cars and trailers should be provided at the north end of Nahmint Lake.

Fire management should be incorporated into the management plan and remain on-site with proper access to year-round water sources. There should be no slash burning.

All fiber logged should be utilized; not just the species required in the processing plants operated by MacMillan Bloedel. Alder, cedar waste along with sub-species should be offered to contractors and woodcutters.

Economically, Alberni needs to harvest the Nahmint Valley. Forestry provides 80 percent of the economic opportunities for the Alberni region. Prior to the recession of 1982, MacMillan Bloedel employed 6,100 people in the Alberni region. Presently MacMillan Bloedel employs approximately 4,000 people in four manufacturing facilities and five logging divisions.

The Nahmint harvest will be 121,000 to 124,000 cubic metres per year and on an 80 year rotation cycle and will eventually harvest 9 to 9.5 million cubic metres of mature timber in the valley. At present some 19 percent of the valley has been harvested. This includes the 800 hectares logged by rail in the 1930s and 1,657 hectares since 1975. The 40 year interval allowed the lower Nahmint to reforest and it is hard to notice any evidence of the logging that occurred in the 1930s.

No fiber should be "exported" out of the Nahmint or, for that matter, TFL 44. All fiber should be processed in the Alberni region. The holder of the TFL under licence from the province should ensure that the maximum amount of processing in jobs occurs in the Alberni region and out of the fiber harvested there. It is no longer acceptable to harvest public land for the profit motive alone.

Competing values include not only recreation, wildlife and ecological but also the economy and infrastructure of single industry communities such as Alberni.

If any restriction in harvesting is contemplated both the company and the employees should be compensated. The time is past when licenceholders were compensated for loss of fiber supply and workers were not.

In conclusion, the process of dealing with these land use conflicts on a valley-by-valley basis is a poor one. At present there are five land use decisions in process in TFL 44: Meares Island, the Carmanah Valley, Clayoquot Sound, the Megin and Nahmint. It is difficult for the companies, the community and the general public to pass judgement on a valley-by-valley basis when one is not aware of what is about to occur in the next valley and its impact on the region. A comprehensive land use plan for the central west coast of Vancouver Island is a much more realistic alternative.

Where from here? After the Forest Service has received input for the Nahmint plan, it should be compiled and a further public meeting be held to allow for comment on the proposed plan before a final decision is made.

I want to thank the Forest Service for the opportunity to present this submission and thank Local 1-85, Sproat Lake Division, the Forest Service, the Nuu-Chah-Nulth Tribal Council and individuals of the Alberni riding for their help in compiling statistics and information and for their suggestions.

SUBMISSION TO THE NAHMINT WATERSHED REVIEW

From: Susan F. Karamessines
RR#7, Duncan, V9L 4W4
746-6599

I am a cultural geographer by training and a social sciences researcher and policy analyst by profession. I moved to Vancouver Island from Edmonton a year ago, drawn by its rugged beauty and the promise of wilderness inherent in its sparse population. I have never belonged to an environmental or conservation group, but all my life I have loved wilderness and rested in it when it was accessible to me.

Several weeks ago I decided to turn my attention from the coast, and begin to explore the lakes of this Island. I obtained maps and talked with forestry and tourist bureau personnel, in search of a wilderness lake on the southern half of the Island. I was appalled to discover that there are roads alongside virtually every lake, although they are not all shown on standard maps. I finally settled on Nahmint Lake, since it has road on one side only, and limited access at the moment.

I spent 8 days on Nahmint. On two days, I paddled quietly down the east side of the lake, noting the damage to slopes and streambeds from the road and clearcuts above, especially where slides have occurred.I saw no birds or other animals there.

I was deeply moved by the wild beauty of the unlogged, west side of this lake, and the animals which live there. On several days I watched otters play, sliding down rocks into the lake; and deer, some with fawns, visiting the shore to drink. I spent most of two days climbing and scrambling up an exceptionally beautiful streambed, a series of dramatic bowls and waterfalls framed by old growth that is equal to the Johnston Canyon in Banff National Park, which many thousands of people visit each year. This streambed is the watershed that is about to be crossed by the new road started on the west side of the lake. When this small watershed is destroyed, a stupid tragedy will have occurred, one which it is in our power to stop.

I am compelled to write this to tell you of my dismay as I realized that this wilderness is about to be forcibly domesticated into a steep-sided tree farm, like the rest of our lakes. Where will I go to be on a wilderness lake? Must I take a ferry to Washington with my canoe? How can this be called sharing the forests, a phrase that I read every week, attributed to foresters?Where is my share, and my little boys'? Does the share of all those who love wilderness not go so far as one lake, with its watershed? I would like to see a referendum to establish these shares, as I don't feel that wilderness advocates are being listened to adequately.

I want to see what is left of the Nahmint River watershed conserved as a wilderness park, with no serviced campsites, minimal vehicle access, foot and horse trails and no motors allowed except on the access road. The current logging road along the lake should be closed.

I believe that the government of B.C. could employ as many loggers to build and maintain carefully planned, rugged trails as would be employed to clear-cut this land. I also believe that within a very few years this wilderness park situated only three hours drive from Victoria would bring many times the revenue to the province and the Port Alberni labor force as would its logging.

I am sure you have been made aware of the environmental reasons for leaving intact sections of wilderness, unlogged, to support the thousands of species of life which such a habitat consists of. It seems that the Nahmint is one of the only such watersheds left on the southern half of the Island which includes a lake.

For all of these reasons, I urge you to consider creating a wilderness park of the Nahmint, with the old growth intact. To fail to do so is to fail in our stewardship of this island.

I am ashamed that it has taken me so long to fully understand the desperation expressed by environmental groups. Today I am going to join one or more of these groups. I only hope that it is not too late.

Susan Karamessines
September 13, 1990

Tom Loring, Ecologist
59 Moss Street
Victoria, B.C. V8V 4M1
October 13,1990

Nahmint Valley Review Team
c/o Paul Pashnik
Ministry of Forests
4227 Sixth Avenue
Port Alberni, B.C. V9Y 4N1

Gentlemen:

At the suggestion of Claude Richmond, Minister of Forests, I am enclosing copies of my recommendations and comments concerning the management of the Nahmint Valley for your consideration.

Since these recommendations were written I had an opportunity to spend some time in the Nahmint Valley. I did not find the recent evidence of wood fiber removal regardless of damage to other resource values to be the least bit reassuring. Hopefully the revised IRM together with a functioning follow-up committee can still provide some demostration of areas managed for integrated resource use. If so I would welcome an opportunity to visit the Valley again.

Sincerely,

Tom Loring, Ecologist

cc.Mr. Wayne Zaccarelli

The Nahmint Valley: some recommendations for it's management.

1, Relocate, or cancell, any existing cutting permits which include areas alongside the lake or any permanent stream.

2, Limit any clear-cuts to no more than 30 acres, with at least as much uncut area left between clear-cuts. Encourage the use of Selection or Shelterwood cutting systems; with mobile longline yarders or low ground pressure small skidders required for all systems. Permit no cutting on hill or ridge tops and for 300 feet below the crest of any hill or ridge.

3, Require chipping of logging slash along roads and fire breaks, but permit no slash burning! This drainage is a natural funnel to spread slash fires.

4, Limit over width trucks to present access roads, provide reloads for out haul. Additional logging roads can be narrower for smaller trucks, and must be located to avoid likely slide areas and other sensitive spots. Side cast and large rock cuts should not be permitted. All side roads must be drained and closed as soon as timber is hauled out.

5, To avoid possible shoreline damage by large moters and larger boats limit lake access to parking areas some distance from shore with launching sites for canoes and cartop boats only.

6, Remove all gates on logging roads, and provide year long staffed registration/information stops on both upper and lower access roads. This is partly to control the volume of recreation traffic, but also to aid in case search and rescue is needed and to reduce littering.

7, Require Licensee to provide funds for repair of present riparian damage and possibly for restocking of fish.

8, Require the Licensee to post a performance bond equal to twice the stumpage value of the timber estimated to be removed from each cutting permit area. This is to assure that all terms of the Nahmint Management Plan are adhered to and that cleanup is done, roads put to bed, landings seeded at the proper time and reforestation provided for. Also, that wilderness and riparian zones are protected.

By: Tom Loring, Ecologist
July 9,1990

9, Riparian Zones of at least 1500 feet along the lake, 300 feet along creeks and 500 feet along both sides of the river, must be established and reserved from any cutting.

SB 90·08·25

WRITTEN PRESENTATION TO NAHMINT LAKE REVIEW BOARD

by

JACK MCLEMAN August 25/90

Thank you once again for an opportunity to address you on the matter of logging in the Nahmint Valley.

Background:- I'm married with two grown children, both working in the Wood Industry. I've worked at the Somass Sawmill on and off since 1971. During that time I've seen many changes to the work force both in Port Alberni and on the rest of Vancouver Island. I've seen our mill drop from 1100 employees to 450 almost overnight, and our local union drop from 6000 members to 3500 in about the same period. I've personally experienced long periods of time on UIC and Welfare and refuse to have myself put in that position again without putting up a fight.

Other Associated concerns:- At present, our ability to earn a living is under attack in the Clayquat Sound, Walbran etc. Now you wish to study the Nahmint Valley. ~~You~~ The government agencies are progressivley putting the Island on the UIC rolls one Valley at a time. ~~You~~ They don't seem to have the common sense to understand that you must look at the whole area as a total and access our job potential on that basis. Each time you put blinders on and just look at one area, we loose jobs, families loose homes and often the desire to survive.

I ask you to consider this factor before you make any more "knee-jerk" decisions that would effect our jobs. Believe me when I say that we are getting frustrated and mad enough to do something on our own.

Some companies don't seem to care if they log or not. They should be told they have to live up to their TFL agreement. Sometimes I feel that it is just us workers who are finally waking up to the threat to our economic survival that are prepared to fight for our jobs.

Don't forget that 55% of our B.C. Economy is derived from the Forest Industry. You need us to pay your wages.

NAHMINT VALLEY RECREATION QUESTION:- As you have noted in my opening paragraphs, I'm not in favour of preservation of much more timber. I've already stated that I believe Vancouver Island is already a park in it's entirety with the exception of Victoria and Nanaimo. (They are both ugly clear cuts that have not been replanted.) It is my belief that no area of the Nahmint should be set aside in perpetuity. As part of the price of doing business, the logging companies should put in recreation areas. These areas don't have to remain constant. After 60 or so years the area can be moved and the first area should be logged. This way we can have logging, a good economy and recreation. It is my belief that if it wasn't for the logging companies opening up the roads, there would be very few areas open to recreation or anything else on Vancouver Island.

Two Alpine areas should be kept accessable for recreation:- Mt Klitsa and Nahmint Mountain.

There should be provision for organized camp grounds for people in campers etc. as well as wilderness camping. This should only be done, however, on a nonpermanent basis.

In answer to your concerns regarding motor boats on Nahmint Lake, I feel that the lake is large enough to handle motorized traffic, but boat ramps should not be built. This would make it difficult for people to put high powered boats in the lake.

Conclusion:- Once again I ask you not to freeze us out of another area. We need our jobs, B.C. needs our tax dollars and even those who want us unemployed need us. There are people in our society who will go to any length to stop us working, even to the point of injuring us. I ask you not to listen to them in the Nahmint or anywhere else.

We will not take being unemployed quietly.

Jack McLeman

Site 127 C31 RR #1
Port Alberni, B.C.
V9Y 7L5

August 18,1990

WRITTEN PRESENTATION TO NAHMINT REVIEW BOARD

by

JACK MCLEMAN

Thank you for this opportunity to express my opinion on the logging plans for the **Nahmint Lake Area**.

I'm married with two grown children who are both working in the wood industry. I've worked at the **Somass Sawmill** since 1971. During that time I've watched the work force in our mill alone drop from 1100 to 450 almost overnight due to the economic down turn in 1981. I myself was out of work for extended periods of time for several years. The longest period being just under two years with only three days work. At that time my UIC ran out and we were forced onto welfare. Since that time the mill situation has gradually improved to the point that everyone who was terminated was rehired. Since early 1989 we hired over 100 new employees. Now we have a small market downturn and some have been temporarily laid off.

Now our management have told us that even when the markets return to normal we won't be able to operate at "normal" levels. This is due to the attacks on our fibre base by individuals who are determined we shouldn't have a job, and if we work they are determined that we will be injured or killed by putting spikes etc in trees and cutting brake lines etc on equipment. After the political fence sitters give these parasites our jobs we won't be able to contribute our 55% to the B.C. economy because we'll all be on UIC and welfare.

It's my understanding that some people want another park in the Nahmint Lake area. It's my belief that all of Vancouver Island is a **"Park"** and should be used for recreation. What makes this possible, in the main, is the logging roads. In fact, if it wasn't for the road building that has gone on for the past twelve years or so there would be no roads into the Nahmint area city people wouldn't even be able to get to it.

In conclusion I'd like to say that logging with an eye to recreation is beneficial to all of us. All our recreation and all of our jobs. Remember that 55% of the money the government spends on civil servant wages comes form people and companies working in the forest industry.

Jack McLeman
Jack McLeman
Site 127 C31 RR #1
Port Alberni, B.C.
V9Y 7L5

P.S. TOTAL WORK FORCE AT SOMASS BEFORE JULY SHUT DOWN WAS 560.

WRITTEN BRIEF TO NAHMINT VALLEY REVIEW PANEL Sept. 9/90

Thank you once again for an opportunity to speak to you regarding jobs and recreation in the Nahmint Valley.

I won't go over again what I said in the previous two public meetings in Nanaimo and Victoria. I would, however, like to repeat my opinion that the recreation facilities of whichever kind you decide on should not be in perpetuity, but on a 75 to 100 year cycle.

As I stated before, I work at Somass Division and we face large layoffs if we don't get the fibre and don't use what we get. My request to the Ministry of Forests is that you ensure that the logging companies (M & B and small contractors etc.) that log in the Nahmint and other parts of the TFL around our area process the wood in the Alberni Clayquot Sound area. We stand to loose up to 150 jobs or more at Somass, all of Plywoods, and have already lost several permanent jobs in logging. This is not acceptable to me. We've been through enough economic downturns in our area without you taking any more land base off of us. We also should not have to watch all those logging trucks going over the "hump" fully loaded with all the species we use in the Valley Plants.

I would also request of you that **all** of the Small Business Develepment allowance wood be used as was originally proposed. To facilitate remanufacture of the fibre down to the finished product.

If the majors will put in facilities like we have at Somass, to use even the smallest pieces of wood, why do you take the 5% off of them? Why not make remanufacture of the wood down to the finished product a precondition of keeping the land base for logging? At Somass we have proposals to remake our log factory area to make it completely environmentally sound and friendly, to add to and change equipment to make it possible to more efficiently manufacture and remanufacture the lumber even possibly using pieces as short as 10". If we don't get the cedar we need to run from the entire TFL and surrounding area, we won't be able to convince our company to invest the money and the job loss will just keep climbing.

I realize that most of what I presented today is outside the scope of your study, but I'd appreciate it if you would keep all of this in mind in making your decision.

Jack McLeman
Site 127 C31
RR #1
Port Alberni, B.C.
V9Y 7L5
723-5851

DRAFT

I.W.A.-C. LOCAL 1-85

NAHMINT DRAINAGE POSITION PAPER

Introduction

I.W.A.-C. Local 1-85 welcomes this opportunity to express our views, our concerns and our desires pertaining to planned management activities in the Nahmint Drainage area. We represent all forestry workers in logging and solid wood manufacturing in the Alberni Valley.

In 1989, I.W.A.-C. developed a forest policy that addressed sustainable forest strategies, land use, environment, reforestation, silvaculture, value added, tenure, etc. The basis of our presentation will fall within the parameters of the I.W.A.-C. Forest Policy.

In opening, we must make it clearly understood that we believe wholeheartedly in a multi-use concept of our forest lands. With a properly integrated resource management plan for the area, we believe that the objectives of all user groups can be met. Public forums allow all user groups an opportunity to express their respective positions.

We believe convincingly in a process of input from all affected groups, something that was sadly lacking (and is totally reprehensible) in the initial resource study of 1975, and again when the plan was revised twice, in 1979 and in the fall of 1989.

History

M & B. Sproat Lake Division

The Nahmint Drainage Area is located in the southwest corner of M & B Sproat Lake Division. The valley is 22 miles long and drains from the Mount Klitsa area into Nahmint Lake, and then south to the Alberni Inlet. Nahmint Valley represents approximately 13,000 hectares of old growth forest,which represents 34% of the entire old growth volume of Sproat Lake Division, which contains approximately 38,000 hectares of old growth timber. The Nahmint Valley plays a very integral part of old growth harvest levels for Sproat Lake Division. The Valley not only provides winter logging sites, but has potential for transitional logging opportunities between the winter and spring months.

MacMillan Bloedel Ltd. and/or their predecessors have been harvesting timber in what is currently known as Sproat Lake Division since the early 1900s, making it one of the oldest logging operations on the coast. The balance of fibre, old growth and second growth, is approximately 50 : 50. The second growth stands are not yet up to rotation, so the balance of old growth is very important to sustain industrial activity and jobs in the Division.

Sproat Lake Division currently employs approximately 250 hourly employees, all of them members of this local union. The A.A.C. in the division is currently at 490,000 m^3 and harvests on a sustained basis.

In 1982-1983, management in the operation made a conscious decision to reduce the cut levels. The cut dropped from a high in 1979 of 683,080 m^3 to current levels of 490,000 m^3. A heavy price was paid. The crew size was cut in half and 250 employees were thrown out of work. The licensee felt the Division was overcutting and could sustain a better future and long-term employment for the remaining crew. It is unfortunate that working men and women pay the ultimate price for poor planning. The I.W.A.-C. does not support overcutting in any way, shape or form. We believe in a sustained forest management, and believe that these objectives are currently being met by the Licensee in Sproat Lake Division. The Nahmint Drainage Area must continue to be included in the A.A.C. of the Division. Deferment will mean certain unemployment.

Nahmint Watershed Integrated Resource Study, 1975

The Nahmint Study was to be a model of an integrated planning system. To say the least, the study did provide for recommendations and plans that were many years ahead of their time. It was to provide for resource use for all users, with policies that would provide timber supply and environmental concerns. The I.W.A.-C. was not involved in the study process (regretably), nor were public meetings convened. The study showed three dominant values: timber, fisheries, and recreation. It was felt that mineral and wildlife were insignificant, albeit industrial activity would increase the area deer population and allow access to the lake fishery and increase recreational potentials and attractions.

The Study developed some very progressive general recommendations and site-specific recommendations.

Aesthetic values were to be taken into consideration. Log road construction was to be of the highest standards and were to be monitored by the appropriate government agencies. Roads were to be ballasted with rock or clean gravel, and there was to be no side casting on grades entering a stream channel. Landings were to be drained. Revegetation was to be utilized on bridge approaches, cut banks and fill slopes. Only wooden culverts or bridges were to be used on fish-bearing streams.

Directional falling and yarding were to be applied away from streams and the lake shore. This practice continues to be implemented and allows for a wind firm leave strip. The study called for long-line or long distance overhead yarding methods to minimize road construction and reduce mileage and prevent erosion, siltation, etc., particularly on ground steeper than 35 degrees. Uphill yarding was to be applied where feasible.

Only 40 hectare cut blocks were to be visible from the lake. Larger cuts of 120 hectares were to be considered 3.5 kilometers from Nahmint Bay and Nahmint Lake. Cut blocks will continue to shape and fit the landscape. Logging of leave strips will not proceed until regrowth is sufficient to satisfy aesthetics, reforestation, wildlife, and slope stability., approximately one pass every seven years. The Plan as well called for a sisty-six foot leave strip around the lake that, in our opinion, may have to be reviewed for site specific applications.

Area recommendations or specific prescriptions can be found in the report, and each area is based on individual needs and requirements that may be found to be site specific. There is little or no mention in the 1975 study of extensive silvicultural activities. The revised plan of 1989 does make mention of incremental silviculture activities, however the I.W.A.-C. could like to see extensive silviculture and stand tending activities.

Revised Recommendations

Revisions to the 1975 study were done in 1979 and in 1989, again without input from I.W.A.-C. or other user groups. Of particular concern to the I.W.A.-C. are the revisions made to General Recommendations and, in particular, Specific Area Recommendations. Many of the practices and industrial activities will continue to be progressive, however the 1975 study had very definitive specific area recommendations. The revised plans seem to be abbreviated or somewhat condensed. It is our belief that the industry is continuing to adopt new forestry and progressive, environmentally sound techniques and practices and should be encouraged to do so. I.W.A.-C. members play an important role in harvesting, road building, planning and silvicultural activities. We, the professionals, the employees, the loggers, are taking a more active role in the new forestry applications. However our experience has shown us that plans must be definitive and constantly reviewed.

It is our belief that the 1975 study allowed for definitive, precise planning. This should not, however, be interpreted that the I.W.A.-C. are opposed to all of the revised plans. Simply put, the I.W.C.-C. feel that the 1975 study was a comprehensive, progressive study that can be utilized as the basis for guidelines. However the study must continue to be monitored with input of the affected user groups, including I.W.A.-C.

In Conclusion

I.W.A.-C. members employed as loggers or millworkers can ill afford to have the Nahmint Drainage Area put into moratorium or withdrawal. Certainly this will result in unemployment. The community of Port Alberni can ill afford to have the Nahmint Drainage withdrawn or frozen from Sproat Lake Division's A.A.C. We as members of the I.W.A.-C. and residents of the Alberni Valley witnessed some very devastating years during the world recession; which we should point out was caused by high interest rates and not automation or technology, albeit we have as working men and women from all industries witnessed the effects of technology. We have moved from oxen to steam, to diesel, to electronic technology and power. If we had not moved with the times, I suppose we would not be here today. World competitors would control the market place.

Port Alberni is a one-industry community. Like hundreds of other communities in Canada we are wholly dependent on the forest industry. We are a small community that has limited other employment opportunities.

Our neighbours, friends and family are now finding employment opportunities in the forest industry in this community. Industry in the Alberni Valley is diversifying. The Somass complex which is new is driven by value added and intensive remanning objections. As well, Coulson Forest Products have announced construction of a value added sawmill. Yes, industry has a long way to go in our opinion. Change, however, comes slowly. We live in an environmentally conscious time. We in the I.W.A. are concerned with the environment. We in the I.W.A.-C. feel that much more can be done in all aspects of forestry, as found in our Forest Policy 1989.

The Nahmint Drainage located in Sproat Lake Division is a watershed indeed, Nahmint Lake being the focal point. The drainage lies within T.F.L. 44. Men and women employed directly or indirectly in T.F.L. 44, including Estevan Division, Kennedy Lake Division, Franklin Division, Cameron Division, Sproat Lake Division, Somass Division, Alberni Pacific Division, Alply Division, and Alpulp Division, have witnessed numerous moratoriums and/or set asides in the last couple of years. Jobs are now in the balance and the future is unsure. For every 275 hectares of withdrawal, three jobs are lost, one in logging and two in conversion or manufacturing. I.W.A.-C. members who live and work in the Alberni Valley feel that the objectives of all user groups can be met by utilizing a progressive, integrated resource plan for the Nahmint Drainage. The 1975 Integrated Resource Study calls for interest of all user groups to be considered, including set asides, leave strips, recreational opportunities, etc.

It must however be stated that the plan should be constantly monitored by a community-based committee representing all local user groups, including I.W.A.-C. We would be naive if we thought that plans would not change with the times, however. We cannot continue to proceed with a valley-by-valley or watershed-by-watershed mentality. I.W.A.-C. members wish an end to the land use conflicts. However it would appear that the issue of land use will continue to be political. I.W.A.-C. members in this province employed in the forest industry contribute heavily to our collectively high standard of living, and we wish not to be the pawns to political inefficiencies.

Thank you.

M. Mearns
2nd Vice-President
I.W.A.-C. Local 1-85

cc: M. Kokura, Regional Local
Mayor Trumper
G. Janssen, M.L.A.
National Office, I.W.A.-C.
R. Skelly, M.P.

NAHMINT WATERSHED REVIEW

If you wish to receive a copy of the draft recommendations please give your name and address below.

NAME: Neil Malbon

ADDRESS: General Delivery, Tofino

POSTAL CODE: V0R2Z0

COMMENTS

- viewscapes preserved as much as possible
- road construction should not cause harm to any fisheries values or other resources
- creation of parks north end of Nahmint lake & Beverly L. other areas if reqd.
- public access by vehicle / foot & boat implemented and expanded

* recreational use needs to be surveyed i.e., if only 1000 people use area then lets cater to that ⟹

ie
base
plan
on
use
not
supposed
use

we do not need large tracks set aside due to government knee jerk reactions because of a vocal minority. If there is high usage then lets do something about it, if there is low usage then lets look at the areas that may have higher rec. value.

We must preserve special places and at the same time maintain a viable working forest.

Nuu-chah-nulth Tribal Council

AHOUSAHT
DITIDAHT
EHATTESAHT
HESQUIAT
KYUQUOT
MOWACHAHT
MUCHATLAHT
OHIAHT
OPETCHESAHT
SHESHAHT
TLA.O.QUI.AHT
TOQUAHT
UCHUCKLESAHT
UCLUELET

P.O. BOX 1383,
PORT ALBERNI, B.C.
V9Y 7M2

TELEPHONE 724-5757

FAX 723-0463

RECEIVED
MIN. OF FORESTS
JAN 18 1991
PORT ALBERNI
DISTRICT OFFICE

January 16, 1991

B.C. Forest Service
4227 Sixth Avenue
Port Alberni, B.C.
V9Y 4N1

Attention: E.J. Beadle,
Chairman of Nahmint Watershed Review Team and
Operations Manager of the Port Alberni Forest

Dear Sir:

Re: Nahmint Watershed Plan Review

We would appreciate receiving a copy of the minutes of the "Open House" meetings held in Port Alberni, Nanaimo and Victoria. We are also requesting copies of any written submissions relevant to the Nahmint Review as well.

In respect,

Darrell Ross
Land Claims Researcher

DR/aw

c.c. Ucluelet Tribe
Angela Cantryn

Printed on Recycled Paper

NAHMINT WATERSHED REVIEW

If you wish to receive a copy of the draft recommendations please give your name and address below.

NAME: Darrell Ross

ADDRESS: see attached

POSTAL CODE:

COMMENTS

Should have direct consultations with first peoples namely the Indian Nations that have owned (and still do) and managed these areas themselves for thousands of years.

Without their consultation it is just another sign of bad faith from all involved!!

NAHMINT WATERSHED REVIEW

If you wish to receive a copy of the draft recommendations please give your name and address below.

NAME: Sreedagh Salas

ADDRESS: Box 881

POSTAL CODE: V8W 2R7

COMMENTS

- please send me the proposals for protecting old growth in the Nahmint.
- is there any plans for other types of logging in Nahmint ie selection; shelterwood systems
- what are your views on machinery
- can we legislate lighter machinery or enforce types of logging which require less roadways such as high lead logging
- what ever happened to small is beautiful. can't we have more independent woodlot operators who under strong forestry legislation on this land Thus keeping BCs capital assets in BC instead of into the hands of the multinational giants

MORE JOBS & A HEALTHY ENVIRONMENT

PREAMBLE:

This working paper grew out of a conversation at Wildwood Tree Farm, Yellowpoint, B.C. on June 2, 1990. Merv Wilkenson, Peter Chatterton and Malcolm Roberton met to discuss our reasons for believing that environmentally sound forestry meant more jobs rather than less. The three of us have nearly one hundred years of relevant experience. Our conversation held many more examples and ideas than those given in this paper, but we agreed that this paper was a useful summary.

1. We share the concern of I.W.A. members for their jobs. Raising a family costs money. Jobs are the way most of us earn that money.

2. We also share the sense that changes in logging practices and forest management are required for those jobs to continue. It is also clear that changing to environmentally sound logging will mean more jobs.

3. There are more jobs available now, waiting to happen. We go to the forest to cut wood. We could go to the beaches, or to clear cuts and salvage the billions of board feet presently lying there.

Merv Wilkenson made a canoe trip in Nootka Sound two years ago and saw 75,000 board feet of good wood, bark still on, on a beach 200 yds long and 16 yds wide. On Cortes Island a resident salvaged 40,000 bd. ft. of useful trees from a small corner of a 100 acre clear cut.

4. More jobs are also available when wood products of higher value, such as moldings or log houses, are produced. More jobs because of the extra work involved, and more money produced from the same amount of wood cut.

CAPUCCI LUMBER making molding in New Westminister, was a father and son operation 13 years ago. They now employ 62 people, much of the wood used in the production is slabs, previously regarded as scrap.

STUBB and HEARD are making log houses in Mission, B.C. and exporting to more than thirty countries. One truckload of trees keeps 5 people working for for five months. One truck load of trees keeps a few people busy in a pulp mill for about 5 minutes.

5. Our present paper mills are surely convertable to running on recycled paper. Modificatione will be required on the intake side and in the plant, but millworkers are a crafty bunch and we have the technology. Let us save the capital costs of putting up new buildings.

Let us save the mill towns and they will in turn save us.

6. People raise families, machines do not. The displacing of people from jobs by mechanization is false economy. In many cases, the jobs are better done by people who spend their wages locally, thuis providing income for a whole other group of poeple in the community.

- At McBride, in the upper Fraser Valley between Prince George and the Yellowhead Pass, local people didn't cotton to helicopters flying around spreading herbicide to kill ground cover thick enough to hold back new trees. For the same sum of money the work was done manually. The cutting checked ground cover long enough for the new trees to get enough light and nourishment to grow above the returning ground cover. The cut down provided mulching around the new trees. dozens of people earned good wages that summer, young and old, and in between. An added benefit was the growth in the sense of community spirit.

7. We are convinced that the future which holds both a healthy environment and a sound economy also holds many different forms of environmentally sound logging practices. It also holds diverse forms of sound economic structure : solo shows, family shows, forestry co-operatives and community logging companies.

We wonder if the I.W.A. can assist it's members to establish such enterprises ? It has the money, and any government wanting a chance of re-election would help.

Looking overseas we find much to encourage us, and to copy. Sweden and Switzerland have stable forestry communities generations strong and going strong. They get more than five jobs from the same amount of wood that gives us one. In the U.S.A. the average is more than three jobs from the same chunk.

Let the government remove the administrative roadblocks to smaller scale, healthy forestry. Let the government change those elements of the present forestry system that are so biased towards massive corporations making decisions so far from the trees they can't even see the forest.

Given these simple changes we believe that loggers, their families, and thier communities , with the help of their unions, can make this province shine.

Malcolm Robertson.

M.R., 5-637 Kennedy St.-
N'mo. V9R 2J9

1/

Dear Ernie 90/Oct/11,Thursday

Please excuse eccentric typing,layout, etcetera; it's the first time on this machine and these notes to you are a trial run. I'm going to give you the essential elements of my suggestions for the cttee. because the various pressures which have delayed me to date are still operating, and I think it more important that you have my notions roughly now than more perfectly next week.

COMPOSITION OF FOLLOW-UP CTTEE. per page 2, terms of reference

1 rep fr. shop floor (N.V.)
1 representative from IWA
1 " " MB
2 reps. from non-logging user groups, e.g. anglers,guides, or R/Vers
2 reps. from relevant ministries on present review cttee.
3 reps. from members of public:
- 1 from an elected body, e.g. Reg. Dist.
- 1 from the general public, who will almost certainly be on speaking terms with at least one interest group such as WCWC
- 1 rep from the student population of the district, may be college,may be high school, but its theit world were

2 reps from natives:
1 from tribe most specifically concerned
1 from regional council of tribes

total: 12 (twelve) is still a reasonable working number but
- suggest a) that groups named above name a rep.and an alternate rep, both of whom attempt to attend mtgs. (if they can't the group must name people who can), though only one speaks on a given question
- suggest b) that cttee. mtgs be well known to be open to all to listen, unless one of the named seats nominates another person present to speak for them on a question.
- suggest c) that mailing list for minutes, agendas, etc. be open to keep people, groups, ministries,etc. up to speed.

From: Malcolm Robertson

[illegible]

90 DEC. 11

TUESDAY,

[illegible]

Dear Ernie,

Thank you for this update.

I have been delayed also in sending a letter off to Dave Bishop re. examination of income and jobs in minimum cutting scenario. However, I have a letter to Dave in draft form which has been with me for these many weeks.

At the request of Don McMillan at Canadian Institute for Community Futures, I wrote a memo of my conversation with him in which he expressed willingness to be a [illegible].

As Don's request came after I'd brought him up-to-date of my conversation with you just before the Tin Wei conf. (Sept. 9), my memo to Don included the chat you and I had. So if I'm hit by a bus the connection is there on paper.

Best wishes right back at you, big guy.

Cheers,

Malcolm

[illegible]

SHARE OUR FORESTS
P.O. BOX 197, COBBLE HILL, BRITISH COLUMBIA V0R 1L0

SHARE OUR FORESTS SUBMISSION TO THE NAHMINT TASK FORCE

Upon arriving at the Sherwood Park Inn, Victoria, August 25, 1990 for the Nahmint meeting we encountered Mr. Jim Gillespe in the parking lot. He informed us that he owned a cabin in the Nahmint Valley and that under a Special Use Permit he was applying for preservation of 40% of the Valley. Mr. Gillespe admitted that he owned a squatter's cabin but did not own any land in the Nahmint Valley.

We also note that the Western Canada Wilderness Committee has built two tree forts and a base camp in the upper Carmanah Valley in order to establish their squatter's rights. Presumably it is only a matter of time before Syd Haskell or others start constructing overnight accommodations in Walbran and other areas.

Share Our Forests has no problem with overnight camping in tree farm licence areas, however, moving into the bush "to live" or "to study" does not give one the right to demand single use preservation for vast areas. It is likely that increased logging road construction will lead to increased recreational use of the Nahmint Valley. It is likely that privately owned illegal cabins will conflict with other recreational users and such cabins should be removed, otherwise vandalism and more illegal cabins are sure to follow.

Share Our Forests feels that it makes sense to put in all or most of the proposed mainline logging roads as soon as possible rather than the normal situation of building roads as the harvesting proceeds. The immediate benefactors of this road building would be recreational users who would gain immediate access to parts of the valley that would otherwise take years or decades to reach.

An example of "putting the roads in first" was carried out by the Victoria Water District on their land in the 1950s. Since that time, equipment and labour costs have sky rocketed, thus over all costs today are greatly reduced and there now is a greater flexibility for log harvesting methods.

Today it will be quite expensive to do extensive road building in relation to volume harvested. Since the recreational users will be the greatest beneficiaries of this effort, it would be appropriate for the public to contribute to paying for the increased road construction costs. This could be done through reduced stumpage fees or other incentives.

In general, the Ministry of Forests, who are acting as representatives of the *forest landowners* (the people of B.C.), should be prepared to pay for unusual requests placed on the *forest tenants* (TFL holders). For example the building of campsites, certain types of research or experimental harvest methods, or other requests made to accommodate the public. By the same token, **the forest companies must pay a "world price" for timber to the Ministry of Forests.**

Another reason for accelerated road building right now is a desire to see the upper slopes of the Nahmint Valley logged before the lower elevation areas. So more roads must be built now in order to reach the upper elevations, however with long line logging systems this could ultimately lead to less road construction in the long run.

In addition, Share Our Forests would like to see more up hill yarding. Yarding up hill is a safer method for the workers. With up hill yarding "lift" is increased in most cases meaning more yarded logs clear the ground with less soil disturbance.

Also, with up hill yarding, any "run away logs" on steep slopes are stopped when they hit the standing timber at the bottom of the cut block. These logs are then easily recovered as they remain in the cut block. In contrast, if the lower slope is logged first, and then say 10 or 15 years later when the upper slope is logged, any "run away logs" from above will go careening into the young second growth wiping out dozens of trees. In addition the "run away" will have travelled too far down slope to be recovered, effectively doubling the loss.

Share Our Forests would also like to see small cut blocks (30 Ha to 60 Ha) where possible. As well, a combination of short rotation second growth harvesting (80 to 100 years) and long rotation (200 to 300 years) harvest combination. In order to accomplish this "mixed harvest rotation", without short-fall problems, an adequate sized working forest land base must be maintained. With this in mind Share Our Forests would like to see a set aside area in the Nahmint Valley limited to about 100 hectares containing a stand of Douglas Fir at the north end of the lake, with adjacent beaches and upstream canyon. As well we would like to see several campsites around the lake.

A 100 metre wide leave strip around the lake, where appropriate, should be included in harvest plans as well as consideration for "viewscapes" from heavy recreational use areas.

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SHARE OUR RESOURCES

PRESENTATION TO THE NAHMINT TASK FORCE

INTRODUCTION

SOR is a volunteer organization based in Port Alberni. We have been in existence for 2 years and currently have 1100 dues paying members. The formation of our organization was initiated by the ever increasing amount of land use disputes which have been polarizing the Province.

Our society believes that the forests of British Columbia should be utilized to their fullest capacity under the auspices of a sustained yield and multiple use program. This results in maximum benefit to all people in the province from the land base.

The intent of our presentation to the task force is provide input on the overall land use strategy for the Nahmint, based on personal observations and review of the original folio and its amendments. As a volunteer organization of people from all walks of life, we do not feel the need, or have the expertise to make recommendations of a technical nature or on a site specific basis. We will leave that task to the professionals of the task force.

What we desire is to make known our mandate of multiple use and "PRESERVE SPECIAL PLACES _ PROTECT THE WORKING LAND".

Our recommendations to the task force can be viewed in terms of our philosophy towards forest land utilization in the Nahmint and general recommendations that can be applied more specifically in the watershed.

LAND USE PHILOSOPHY

Our basic philosophy for the Nahmint revolves around the role this valley plays in the future viability of Sproat Lake Division and its 250 employees. At present, in excess of 25% of central Vancouver Island is currently under some form of preserved status in Strathcona, Pacific Rim and the newly created Carmannah parks. Our society believes in the need for preserving special places but we also believe that their is already enough protected wilderness in the vicinity.

There has been logging in the Port Alberni area for a hundred years. In the past old growth timber has been the basic building block of the industry and catalyst which created the City of Port Alberni. Regional 2nd growth stands have not reached maturity. Until they do, the role of old growth timber is as important to local employment as it was in the past.

The Nahmint contains 34% of the remaining old growth timber under Sproat Management. It is a vital component in the viability of the operation due to its winter logging opportunities. The Nahmint must be kept in the working forest to ensure the long term future of Sproat.

Our society believes in the concept of multiple use. Carefully planned road development of the valley is compatible with the concept of multiple use as this provides wheeled recreational access which can be used for a variety of purposes by a diverse cross section of people.

Our recommendations, specific to the Nahmint are:

PRESERVATION

- A permanent set aside should be established in the vicinity of folio area 15. This reserve should include the beaches at the north end of the lake , the stand of boom-stick sized fir adjacent to the beaches and the waterfall, canyon complex along the Nahmint upstream of the beaches. It should be connected by a shore line set aside to Folio area

11 (Blackies Cabin). Total area should not exceed 100 Ha's. The land base involved in this set aside should be delineated on maps and the timber removed from TFL 44 AAC calculations.

With the exception of small reserves around campsites, this should be the only land withdrawal from the TFL in the Nahmint.

FORESTRY

- An intensive silvicultural program should be initiated in the watershed with the intent of reducing the AAC loss caused by set asides elsewhere in the drainage. This should involve commercial thinnings in the older second growth in the lower Nahmint.

This program should be financed thru the stumpage appraisal system with a fair allowance given to the licensee to encourage compliance.

- Logging area design, location, size and visual impact should be based on the:
  - MOF Landscape Management Handbook
  - June 1/1990 MOF "Coastal Planning Harvest Guidelines".

- Riparian areas should be protected by selectively logging the "Streamside Management Zone". This zone should be as wide as possible on a site specific basis.

- Folio areas that were previously designated as no logging (Folio Area 6) should be selectively logged. The intent would be to recover some timber and at the same time minimize the impact on recreational opportunities.

- Cutbanks and fill slopes should be Hydroseeded on access roads to the Nahmint and those which are visible form the lake.

RECREATION

In the 1975 folio consistent reference is made to the "recreation potential" and "recreation values" of the Nahmint. At that time these statements were educated guesses. The recreational aspect was the driving force behind the folio. Many of the decisions made in 1975 were based on the assumption of public use and appreciation of the recreational opportunities in the Nahmint.

To assist task force members in their deliberations on recreation questions in 1990, an effort must be made to determine the recreational use of the watershed over the last 15 years. The answer would be an important component in determining the amount of time, money, land, and human resources needed to develop the recreational resource in the Nahmint.

Under the assumption that the recreational potential and values are equal, or greater to those envisioned in 1975, the following recommendations are offered.

- All recreational development should be funded by the government. This is in response to the logic of what the public wants, the public should pay.

- A network of wheeled access campsites and boat launches should be established throughout the watershed with locations determined by the task force based on recommendations of an independent consultant.

- A signing program should be initiated on Forestry roads leading to the Nahmint, explaining the Forest History of the area.

- A trail and trailhead should be built to Mt Klitsa

- The development of an industrial heritage site should be encouraged in Rail/way logged lower portion of the Nahmint. This could involve erection of a display of renovated old time logging equipment accompanied by an interruptive signing program.

ADMINISTRATION

- A procedure for annual followup to the eventual product of the task force should be established. The results of these annual affairs should be made public in local newspapers. The makeup of the followup committee should be identical to that of the taskforce.

- Policy statements form the task force should be formulated so that site specific application can be applied

FISHERIES

- The feasibility of a fish ladder on the lower Nahmint should be determined.

CONCLUSION

The mandate of the 1975 task force was to develop a multiple use strategy for the Nahmint watershed. SOR believes that this mandate is still valid.

On the basis of this belief, the duties of the 1990 task force involves replicating the 1975 process and establishing a format to ensure that the recommendations of the task force are fulfilled. This is particularly true of the recreation component of the management plan.

British Columbia is dependent on its forest lands for the economic health of the Province. On a smaller scale Port Alberni is dependent on the Nahmint.

KEEP THE NAHMINT IN THE WORKING FOREST.

VICTORIA FISH & GAME PROTECTIVE ASSOCIATION
P.O. BOX 93, VICTORIA, B.C. V8W 2M1

OCT
PORT ALBERNI DISTRICT OFFICE

September 30, 1990.

Ernie Beadle,
Chairman,
Nahmint Watershed Review Committee,
Port Alberni Forest District,
4227 Sixth Avenue,
Port Alberni, B.C.,
V9Y 4N1

Dear Ernie:

I refer you and the committee to the Association's letter of application dated August 27 for a Special Use Permit within the Nahmint watershed and accompanying land use map couriered September 21 to your office to the attention of Mr. Paul Pashnik, District Manager.

The Association has some additional concerns related to logging development outside the area of our S.U.P. application.

Consistent with our submission to the B.C. Forest Resources Commission, we support cut blocks of 10 hectares (25 acres) or less. There is presently no effective control over the size of clearcuts - adjacent blocks can be successively clearcut leading to the mushrooming visual impact of progressive clearcutting so evident today. Aesthetic quality and value to wildlife can be improved with smaller openings.

The Victoria Fish & Game Protective Association supports a combination of selective logging and small clearcuts suitably spaced (commonly referred to as 'patch' logging). Large scale progressive clearcutting evident in the upper valley and above the lake toward the upper end can no longer be tolerated.

Werner Kurz and J.P. Kimmins of the Department of Forest Sciences at U.B.C. state that "Some of the negative ecological impacts of clearcut logging can be avoided or reduced by decreasing the size of the cut blocks. Many of the more serious impacts of clearcut logging witnessed in B.C. are attributable to the scale and location at which cutblocks are created, to the type of logging equipment used and to road building practices."

...2

Because grapple yarding requires excessive road construction with resultant loss of land base for both timber and wildlife production, this method of logging should be stopped. This is the most environmentally damaging method of timber extraction with its increased potential for erosion. From almost any consideration it does not make sense. All logging in the Nahmint should be by tower and long line carriage systems which minimize road construction. Selective logging should be practiced in all sensitive areas.

Timber extraction within the Nahmint drainage should be on a sustainable basis. We oppose the practice of exhausting, over the short term, any watershed's mature timber while supposedly maintaining the sustainability of a mature timber supply within the operating division or T.F.L.

Road construction techniques must be altered to eliminate the practice of sidecasting blasted rock and overburden which damage and bury timber and soil. Situations like "The Slide" on the Riverside 100 Mainline should never recur. When there is a need to remove excess road materials they should be end hauled to designated sites and not sidecast downslope as in the past.

The subject of riparian protection, recreational corridors and wilderness areas has been delineated in our S.U.P. application and land use map. However, it is apropos to comment further here. We oppose site specific requirements for leave zones along watercourses and around lakes as this approach has resulted in virtually nothing being left. Additionally, previous policy and practice has failed to protect recreational and tourism values associated with hiking, nature appreciation, et cetera. View protection from the lakeshore and riverbanks are key. The feeling of being within the forest must be retained and so one must be protected from the sight of the clearcut opening. Adequate depth of these corridors is necessary also to prevent, or at least minimize, windthrow.

The burning of slash should be encouraged to improve wildlife habitat; especially game species such as deer and grouse which are the backbone of hunting on Vancouver Island and an important economic consideration. Public opposition to burning is largely based on the visual impact of smoke and the blackened site. The use of fire as a tool to improve wildlife habitat is a common practice over much of the province and is consistent with multiple use principles. This practice is supported by the B.C. Wildlife Federation, of which our Association is an important member.

Much knowledge has been gained in the conduct of controlled burns which minimize soil damage (ie. spring versus fall burning). Ease of access for tree planting is an added benefit. In areas unsuitable for burning for various reasons, small debris should be chipped for economic use or chipped and scattered back on the land.

...3

The Victoria Fish & Game Protective Association anxiously awaits the committee's proposed recommendations for changes to the 1975 Nahmint Watershed Integrated Resource Study plan.

Yours truly,
Wayne Zaccarelli
Wayne Zaccarelli,
Conservation Chairman.

REFLECTIONS ON THE NAHMINT - PAST AND PRESENT

Nahmint Lake was a pristine, wilderness lake when I fished there in July, 1966. The only access was on foot or by float plane. Not a tree had been cut in the virgin old growth forest blanketing the lake's watershed.

I had flown in with pilot Vic Dawson for a memorable weekend's fishing courtesy of the Colonist King Fisherman Contest. The fishing was good. The lake and river are home to quality Rainbow and Steelhead trout. The lower river was once known for its world-famous trophy chinook salmon which provided excellent fishing in Nahmint Bay on Alberni Inlet. Mismanagement of the commercial net fishery decimated this exceptional stock back in the 1970's. Enhancement techniques are slowly restoring this run of giant salmon.

In August 1975, a Nahmint Watershed Integrated Resource Study was completed by the B.C. Forest Service. MacMillan Bloedel, the company proposing development of the Nahmint, government resource agencies and the University of B.C. were other participants in the study.

The last couple years have seen MacMillan Bloedel's road building and logging operations approach and impact Nahmint Lake. The public has, within the past week, been made aware of unacceptable road construction and logging practices which have resulted in slides and clearcuts to the lakeshore.

Environmental damage in the Nahmint is not more widespread only because MacMillan Bloedel's intrusion into the watershed is not yet complete. Considering that a maximum 24 hour recorded rainfall of over 18 inches in the upper watershed could fall again, this time on steep clearcut slopes, can another environmental disaster be far off?

The Integrated Resource Study recognized three dominant values - fisheries, outdoor recreation and timber resources. It noted that "Recreational use of the Nahmint area is surprisingly high considering the restricted nature of present access ...". The study cautioned that careful protection of recreation values and fish habitat would be necessary during road building and logging activities. Public input at the time, although limited, was against intensive development. It was felt the Nahmint watershed should be "... left in an essentially wilderness state with only limited recreational development."

...2

The wishes of the public have been passed over by the Ministry of Forests and the government while they assisted the company to maximize timber extraction at the expense of the environment. Several recommendations contained in the Nahmint Integrated Resources Study have not been carried out or have been totally ignored. Time and again the public's attention has been drawn to the inability of the B.C. Forest Service and the Ministry of Forests to adequately protect our environmental quality.

While MacMillan Bloedel should be criticized for environmentally unacceptable forest practices, the Ministry of Forests allows, and even encourages, them. The government agency has the final approval of company cutting plans and the longer term Management and Working Plans.

An objective of the B.C. Forest Service as stated in the Nahmint study report is to "... develop and enforce policies which will ensure for all time the proper balance of timber supply, forage production, forest recreation, wildlife protection and environmental preservation on the Crown forest lands of the province." That balance is more and more being questioned by an increasingly aware public.

My concern and that of the Victoria Fish & Game Protective Association is for the protection of the unique values of the Nahmint Lake and its watershed. The road building and logging prescriptions employed to date are not sufficient. They do not meet the public's expectation for the 1990's. Poor logging practices are not only a reality of the past, they are alive and well today and surviving in the Nahmint.

Wayne Zaccarelli

Wayne Zaccarelli,
Conservation Chairman,
Victoria Fish & Game Prot. Ass'n.

May 7, 1990.

NAHMINT REPORT

1990

VOLUME II

PART TWO

Jack McLeman
Port Alberni
Site 127 C-31 RR #1

First of all, I have handed you guys, you people, a copy of this and I would just like to use it as a guideline. This is the first time I have been on one of these type of things to make a proper presentation, so I would like to thank you for the opportunity for doing it. Thank you for the room next door, I think its well laid out, some nice pictures of some nice areas.

A little bit of my own history, who I am and where I am coming from. I am married, I've got two grown children who have both worked in the wood industry, one in Port Alberni, one at Harmack and I worked at the Somass Sawmill on and off since 1971. I worked at Harmack before that, I ran Camp Ross Bible Camp at Pachena before that, or in that time somewhere, and I worked at a lumberyard here in Nanaimo that used to be called Moore Wittingham Lumber, so most of my life has been in the forest and working in the wood industry. During the time that I have been at Somass Sawmill, which is in Port Alberni, it is on the waterfront it is a cedar mill. I have watched the workforce go from 1,100 to 450 within a year, which I consider as you note there almost overnight. It was due to two reasons, one the economic down turn of 1981 and the change from shingle mill to a shake mill and the Texas people decided no more wood stuff on their roof and that was the end of the contract and the shingle mill went down. So I was out of work myself in the 81 era, I worked two weeks on two weeks off, I worked maybe two months off and another week on and then there was approximately a two year period where I had three days work. During that time my UI ran out and I had to go on welfare, that time my wife wasn't working and we still had the two boys in school, I was trying to make money at a part time job that I made up myself, a business and government funding just did not come through there just wasn't any such thing to help people like us at that time. I guess the governments were as broke as we were and just as we were starting to pick it up I got called back to the Mill and because I was broke I had to go, so I'm there now. Since then we were off again a few times but still its picked up and most of the people that are still around that were terminated in 1981,2 and 3 are back. But that just gave us 450 people still. Like there was a lot of retirements in there and since January of 1989 they've hired approximately 150 new people. Right now all of them are laid off because of June there was a market downturn in the eastern U.S. on account of the ... no more wars and the military establishment wasn't buying. But I'm presently at Somass, I'm a member of the union I'm not management, but I've been invited to sit on a taskforce just for our mill to see if we can keep running, and that taskforce has several mandates but the main one is to see how we can operate efficiently, what levels we can operate if we have the markets and how many people can we keep employed. Presently there is 560 on the list as of June 1990.

Several projects we are looking at, re-doing the mill, rebuilding it in many ways to make it far more cost effective, more value added products, get more out of the fibre, a lot less waste and all these things have a flip side. Like as soon as we started doing our finger-joining the reman plants in the lower mainland and in around Vancouver Island, used to buy our rough lumber, started screaming blue murder "we're not getting any fibre cause the majors are taking it off of us" so the government in its wisdom and with some justification took five percent of the TFLs and called it a small business development allowance of some sort and that took away jobs from the Somass Sawmill, period, no questions. It is the definite fact. It is taken out of the TFL. Now it didn't take it away right away because we were still cutting and there was the fall down is now coming through. Half of Carmanah was taken, the other half is now in dispute. Meares Island is gone, Kennedy Lake is all under attack, the Walbran, because of some bird that may or may not exist, is under attack and now we hear that Nahmint Lake, beautiful spot fairly close to Alberni. Took the company about 12 years to build a road into there, if my memory is correct of when they started, I might be out a year or two. They have always stopped as soon as the rains hit and stopped as soon as the fire season was there and they did not do anything that would damage the environment. They had a lot of strict rules and they obeyed them and abided by them. Now it is time to go in there. It is the Sproat Division's winter show, without that they will work 3 to 4 months of the year - max. That is all that is left. There has been some overcutting in the past but a lot of the overcutting that we are hearing about right now is being caused by things being taken out of our TFL. It has been caused by when they thought the 100% was at 3 million cubic meters a year, it is not now, it is down to 2.6, 2.4, and our management, MacMillan Bloedel management say its going to be 2 million by 1990 and that is what they say by the time things are taken out. Now they haven't even consider losing the Nahmint in those figures. Or any part of it. So what we're doing, by discussing these things is hopefully keeping employment in British Columbia. The forest industry contributes 55% of the BC economy. You take away that and get it down to 45% there is nothing to replace it with, so the BC economy is going to die. We can't survive without the dollars from the resources. Tourism never supported a large economy, or diversified economy it can't do it because it is too finicky. I mean one day Europe is a fad and the next Vancouver Island is a fad. I can remember when the West Coast Trail was first opened up, European periodicals and New York periodicals and the wild life stuff- hey great thing. We had people out here like everywhere and I was at Camp Ross at that time and we had to help people because they came for a Sunday afternoon walk and you guys that have been there know there ain't a Sunday afternoon walk, you have to carry some food with you and they weren't doing these things and they were just about dead by the time they got to the other end. And that is what is happening now. We have a Carmanah and we have all "Hey, go see the big tree". Don't tell anybody that it is a little effort. People who should have never been off of pavement because they have never been off pavement are trying to get there. Trying to go out there and I guess natural turn of events is going to be they are going to start another fire out there and they are not going to be able to get it out and it will be gone. So not always when you make it park are you gaining anything. I believe in parks, I've...my families as they were growing up never had a lot of money, talk about since I was married- simply because of the fact I didn't get a lot when I was in the lumberyard and I didn't get a lot when I was running the Camp and then when I started in the wood industry I got unemployed a lot. So I never really had a lot of bucks so we just enjoyed Vancouver Island. We have been to Vernon Lake, we have been to Elsie Lake, we go to Gracie Lake and when the kids were little some of the best holidays we had we down the sounds on Copper Island where a friend of mine had some property there, an older gentlemen and his wife at that time was alive and also up, like I say to Vernon Lake, Port Hardy hikes into Cape Scott and the West Coast Trail and that is how we have our entertainment and our enjoyment when my boys were growing up. The Nahmint area is new to us we couldn't drive into it to far, we hiked in a few times and go to Gracie Lake and walk and things like and it is beautiful and there is a lot of areas there that should be set aside for recreation. But there should not be areas there set aside that you can't log ever. Of course, you never include in your logging your initial rided edge of the lakes and this sort of stuff you have to protect the lake and so on, but you should set aside areas for recreation now. The company has always put in, all the companies that I know on the island, have always put in campsites. They put them in down at Nitinat, they put them, M & B just off hand I can't throw out a whole lot of names anymore cause it has been a while since I have been at them. BC Forest which is now Fletcher Challenge has several south part of the island from... I forgot the name of the bay down there but anyway, just north of Sooke and just south of us and so on. But Camfor has them at Vernon Lake, Woss and all these places and they are nice campsites and we enjoy them and I think that it should be forced to set them up, I don't think you have to force them all. They should set them up I don't think the Government should be too involved in it. Other than regulation and don't let them do things like that has gone on in the past, like we see where that so called black hole, that shouldn't be allowed. We said that, the unions have always squawked for that and we didn't get support from the community. Now we have people living in the city, which I consider the most ugly clearcut in the world- Victoria and Vancouver. I was brought up in Victoria, so don't tell my parents I said that. But..um... they are now telling us that we can't cut trees. They are telling us that we can't make a living and I guess in conclusion here I would just like to say that logging with an ideal recreation is beneficial to all of us. All our recreation and all of our jobs but just remember that 55% of the money the government spends on civil servant wages comes from people and companies working in the forest industry. I don't want to be on welfare again, thanks.

Panel comment:
Thank you very much-Jack. Some of us may have a question to help understand the points you raised.

Panel Comment:
One of your main points is that there should be adequate recreation areas defined and set aside and you mentioned things like the Vernon Lake campsite was an example I guess there is actually a spectrum of to what recreational values should be addressed. My only point is that if you would like to see better recognition of recreational values addressed in the Nahmint review to either make sure they are presented in here so that we, as the review team can have them incorporated and with Jacques Marc representing Port Alberni Forest Service recreation that he can specifically address your concern. So if you haven't and don't think you've have adequately covered it off in this letter can you do a follow up submission to the chairman here.

Panel comment:
Jack-the Somass Mill originally 1100 staffed? That is when it started up or it was 1100 all through the 70's?

Response:
It was 1100 all through the 80s.

Panel comment:
When did it have its first significant drop?

Response:
The first drop was shingle mill shut down which went down and then up again in 1980 it went down. I believe it was 80 or early 81, I know we just negotiated severance for the guys last year so the date I should know but I forgot it. And then the next drop was as you all know when the whole world came to an end in 81.

Panel comment:
Two other things: One getting back to the recreation, just to re-emphasize. When you were, if you have some specific feelings for areas and the size of which and also the nature of whether they be old growth or second growth type extensively managed areas can you specify that?

Response:
Well, where we've got old growth now lets put some old growth aside but there is going to come a time when what has been

logged is going to grow up and be 100 years old I mean I am talking a long way down the pike. The companies planning the Carmanah for instance, I haven't seen their plan for Nahmint, I am getting it Tuesday and I will be in Victoria next Saturday and I will have that. But it was almost 100 years minimum to pull through the thing so 100 year old tree is not too shabby. It is still a nice tree. There has to be some old growth set aside, I believe that has been done in our province, I believe we have enough of that but nonetheless I like hiking, I like back-packing, I like hiking through places that haven't been logged and I like camping, I like going by a lake fishing I can't afford a boat but I enjoy fishing, I fish from the side on lakes a lot. A lot of trout fishing, sometimes I even get to fish for salmon down the canal but that is a rare occasion. But yes, that is what I am after.

Panel Comment:

I guess I have three points to be made here in terms of area designation. In your submission can you identify areas that have been completely clearcut that you think should be rehabilitated silviculturely to a new recreation site? Number two would be for example: Not having the same knowledge that you do of the lower watershed from the lake down to the estuary which was railway logged at one time- Is there any area along there that you think would make a suitable recreation site? Or, has specific values that should be addressed in that regard? And number three are there any old growth areas such as, you know the head of the lake which we already know is probably going to be set aside, but are there any unique little spots, any little estuaries, creeks or whatever that you think have value that are still old growth timber, that should be addressed? See if you can put names to them it is going to help us out on the review. So if you can break it down into those three classes than we can handle them accordingly.

Panel comment:

I want to make a comment here. Aimed more at Ian than anyone else, but also for the information for everybody in the room. Ian is talking about old growth here and the terms of reference of this review team at the moment don't apply directly to the old growth issue. Because there is an old growth working group, in the province made up of many different people who will be addressing that particular issue and what we will do any representations we get in regards to old growth will be past on to the old growth working group but we may not be able to make specific recommendation, emanating out of this review, with regard to old growth. We will simply acknowledge your comments and make sure they get to the right people.

Response:

I guess I am scared to say hold anything aside, there is people out here that want to hold it all.

Panel comment:
Well that's good to be determined you know. I would like you to distinguish whether you, you know, what differences you do see in terms of this areas of some second growth coming along is just a great place for, we need to put a campsite and stuff like that. They have done that up at Aushlit Lake for example, you know, that kind of thing. That is all second around there. So that area versus if is some area were you have taken the kids to for years which is a 10 hectares of old growth right beside a creek and that is one of your favourite fishing spots, then lets put a circle around that too.

Any more comments or questions?

Panel comment:
Only one reference to you were referring to you agreed that there had been over cutting, but were you referring to the whole TFL per se. I had the impression you were referring to the Nahmint per se.

Response:
No, I was referring to over cutting, not just in our TFL 44 but all over and some of the overcut is only come about because of it has been taking out. So therefore, we suddenly got less area get our AAC out of.

Panel comment:
So no specific cut block concerns for the Nahmint Valley then as to what you have seen?

Response:
No

Panel comment:
John have you got some questions?

Panel comment:
I won't be quite so tough on Jack as Ian was.

Response:
He wasn't tough. He didn't even ask for an argument.

Panel comment:
I don't think we are here to argue, but if I interpret your comments correctly Jack a simply point that you kept raising is that you don't want to see Nahmint go to a single use in this case preservation, and have logging excluded from the area and that your are still very much would like to see a balance of values in there. Perhaps, areas preserved for recreation, as well as fisheries, as well as logging. And this isn't so much a question as it is merely a statement, as I see the roll of the committee as a committee member, and that is that our guidelines clearly are not to create a new plan but to open up the old plan and perhaps see if it can

better service an integrated type approach to resource management. And I don't believe there is, certainly speaking for myself, on the committee, that I don't visualise this area as becoming a single use for any resource and if that can perhaps can make you feel a little more comfortable the plan as it is shown on the wall there you will certainly see some changes but I would still ... my own emphasis is to still see a balance of uses in there, Forestry being one of those certainly. I don't have any specific questions, thanks.

Panel comment:

I have one question, Jack you commented about recreation sites and I would like to know a little more about your view of recreation sites. Would you, you see the Nahmint as being essentially an area where recreation sites are very rustic, essentially left in its natural condition as possible, or do you see room in the Nahmint Valley for a mix of recreation sites? Perhaps some that are oriented more toward vehicle camping others that are really more rustic and suitable for people who want to get away from the madding crowd. Do you see room for both or would you prefer to see one?

Response:

Well, there has to be both if you are going to have the rustic because people, from personal experience, people from a city and I am not knocking city people but I do a lot lately, they do come out. They come in a camper, they have been used to going to a campsite that the government set up and that is what they are expecting and that should be there because otherwise they're going to get injured or they're going to damage the environment, so it has to be there for them. I don't think it has to be in the same place all the time, I guess that is what I am saying. It can move around ever 50 years and go somewhere else and then have a whole area set aside for both kinds of recreation. I don't know how long exactly they said they were going to take the cut to the Nahmint yet, they are coming to talk to me on Tuesday, everyone has been on holiday and I found out about this on Monday. I will see you next Saturday.

Panel comment:

If we can be of any help to you in the meantime, any information whatever you need, the same goes for anyone else in the room. If you need more information tell us and we will try and get it to you. The only other question I have, has to do with recreational use in the Nahmint Lake. If there's boating access to that lake, do you think it should be in anyway restrained or do you see it as ... really anyone who can launch a boat could use a boat on that lake? Do you have any thoughts?

Response:

I have a lot of thoughts on it, but how can control it. Like

I would say all kinds of thinks if I was camping there I wouldn't want a jet boat going by waterskiing. When I go out camping I like peace and quiet. I don't like Sproat Lake cause that's already given over to the big boats. If I had I guess my way would be small motors or definitely a quiet one, how do you control it?

Panel comment:
Well, we know what your recommendation is. That is the main thing

Response:
I hate to say just paddle your canoe, I wouldn't mind that either. It is a fairly big lake it could take a motor though.

Panel comment:
I have no other comments or questions. I thank you very much Jack I really appreciate that and we will see you next week.

Panel comment:
Has Nick showed up by any chance?

Panel comment:
No, I haven't seen him.

Panel comment:
Well, I think then folks we can adjourn back to the other room, if you would like and anyone who would care to make a presentation can contact me and we will assemble here to hear your thoughts. Thank you very much for being present here.

BREAK

Panel comment:
Thank you very much. Our presenter scheduled for 2 p.m. has now arrived so we would like hear a presentation from Mr. Boss. If you would like to come forward Nick. If you just give us your name and address. Your verbal presentation is limited to approximately 15 min, after which we will ask some questions if we need to in order to better understand your presentation and that is really the purpose.

Nick Bos
5668 Popular
Port Alberni

I live in Port Alberni I have resided here since 1957. I am the father of four children. I have worked in the industry since 1957, sawmills, small logging camps, and larger divisions. I have worked mainly in the Alberni Effingham Inlets, Zuciarte, Sechelt, Muchalat Inlet. I was the Vice President for the IWA for a 10 year period from 1980 to 1990. I have travelled the coast extensively.

Well, gentlemen first of all I appreciate the opportunity to speak to you this afternoon, particularly on the matter of the

Nahmint Valley and logging period. I guess the greatest resource of any nation is its workers and those aren't my words they have been spoken by your Prime Minister by the premier and probably by every leader of the western world. So, if one sits in judgement or has to make decisions on the future of any nation, whether it is a natural resource of any kind the prime concern has to be people.

The area which is being scrutinized this time I guess in an area in TFL that is normal logged by Sproat Lake Division itself. Sproat Lake has 240 employees and wives and children. There is an additional 27-plus staff people and their families. There are also a number of contractors in the division and secondary support industry of which is hard to give you a real tangible figure, but everybody involved with the particular in the TFL Sproat Lake Division, you can estimate yourself how many people really would be involved in terms of employment. Now I want to address my first remarks to employment and people, because basically what we say, what I say, what we come from things are very much simpler I suppose than sitting across a desk and having to make decisions on the environment and particularly the further you get away from the actual tree the further away the decision will be. I.e. if you sit in Victoria, that decision may not be as realistic as when you sit on sixth avenue and it is even perhaps more unrealistic if you set chokers at Sproat Lake Division or Franklin or Kennedy. So again if we look at a new working area that comes under scrutiny, then the first and foremost resource that has to be kept in mind is the people. I just want to stray for a minute about the comment that was made by, and I don't want to use the word bureaucrat, but I don't know the fellows name, last Tuesday night at a meeting in Port Alberni at the Echo Centre. When discussions were held in regard to the Clayquot Sound, and even though the committee has not reached the consensus, he himself said that there would be a loss of jobs or loss period in that particular area. And for any bureaucrat to take it on himself to make decisions or saying or even hinting towards decisions when nobody has reached a conclusion is damaging for all of us. On that particular committee what has happened, that committee has been jacked around whether we like it or not or no matter from what sector your from. It seems to be adding up into a frivolous mess and mainly because some people that do have the influence to make decisions simply are not doing it. We are extremely unhappy with it. I would briefly like to touch on the area of scrutiny, I am by no means an expert in forestry or silviculture or logging. All I can offer you is my opinion is my years of experience and my travels. What we are talking about here is not MacMillan Bloedel. Quite frankly, if MacMillan Bloedel wasn't there it would be somebody else. So I am not talking about MacMillan Bloedel I am talking about the government and the people of BC and particularly, again Port Alberni and this case Sproat Lake

Division. So it is not MacMillan Bloedel that is on the chopping block. Just off the record, MacMillan Bloedel with the changes that are taking place behind the illusive, now illusive iron curtain could be named MacMillan & Stavanavich next year because then they move out and pull up their stakes and say look we put our money where we want to. That is again the people that are in the area are the important things that we have to look at and deal with. So it is not the company, quite frankly I don't give a darn what the name of that company is, I don't care whether her stocks are at $18, $19, or $17 that is not our concern, our concern is jobs. The area itself and you people again are more knowledgable than myself when comes to actual facts of the logging area. To me, certain things will have to change or at least being enhanced so the logging methods will be more acceptable to all people. The old cliche of trees forever that was used in the 40's and 50's simply is incorrect and that kind of cliche should be left behind. What we have to do and what we should have been doing some years ago and in a fact did part of it, is take better care of our forest. And to take better care of our forests is to first of all do a better job harvesting. In the matter of harvesting an area like Nahmint which is relatively untouched particularly the whole drainage, certain things will have to have more attention when we start into an area such as Nahmint, a valley of that size, road construction has to be first and foremost on our minds. And when we talk about road construction we don't just talk about taking the timber down the most economical and simplest way. We talk about in the concept of recreation, the visible site itself, fire protection, and particularly access to the whole valley. If the word that I hear different people use is that we might make the Nahmint area a model for logging, and I think those kind of words are wonderful because if we can, in fact, use Nahmint to make it a model we can apply that everywhere else and therefore enhance not only the countryside and the environment we live in but also the recovery of wood. So there again if we do any road construction in the valley itself and there is some already, I think what has to be looked at is the whole area not on a year by year or five year term, but on the term of perpetual logging in the area, basically. So, what I say and where I think some of us come from that have been involved in logging, if we are to put in roads, proper roads will have to be put in. Proper drainage and perhaps the whole road should be put in before any extensive logging takes place in the area. In other words, if we are going to make it a model for logging then the whole area should be accessible, so we don't concentrate in one area and over-log. Because it is expensive to build more grade. Now I am not particularly interested who funds the road building, I don't come in here giving advice on where money should come from, but definitely if we look at that area for recreation for perhaps a future tourist attraction, it is certainly is not now a tourist attraction, it might be in the future. If you look at the safer area in terms of fire protection which will be very important to us in the future as more roads open up, then we suggest to have a look at, a close look, on how roads should be built in the area. The other one which is very contentious for myself and for some people, if roads are to be built in steep terrain, first what I would suggest is that you should look at not building roads in the steep terrain if at all possible, because it does extensive damage to mountain sides. But if there is no other way than I would suggest that when those roads are built not to shove the ballast over the side, to truck it out and use it for future ballasting for roads elsewhere. In other words, don't just go in there on steep terrain and blast and shove it over the side because that is in effect, for which leaves for permanent ugly scars and which are not repairable. The matter of grade construction has greatly improved in the 70's and 80's as I am sure you are aware, the use of the excavator has enhanced the landscape a terrific amount instead of pushing ballast over the mountainside we now place it and sure as hell make better use out of it than previously. But, my concern is in steep terrain because once you have scarred a face, it is not repairable. I think what logging companies will have to look at in sensitive areas and of course the question of sensitive becomes sometimes very narrow when you become besides streams, particularly fish streams. But alternate methods of logging should be used. The matter of dragging logs besides creeks should not be acceptable.

Panel comment:
You have about one minute.

Response:
I have one more minute and I'm an hour and a half late. You are very punctual sir. Basically the reason for looking at alternate methods of logging, if we go back to the olden days when we had sky lines and logs were actually lifted right of the ground they did very little damage to the side hills, so there was very little erosion to the soil itself. Now if you look at creeks particularly fish creeks, now we shouldn't being dragging logs around, they should be lifted out. The other area which I think is very important is directional falling. In certain areas where we are on bottom land and we are close to the drainage particularly if there is spawning grounds in the area, trees should be felled away from the creek. Or trees should be felled to put it even more bluntly, to do minimal damage to the soil around it. And most of the time this is possible by wedging a tree in a certain direction, jacking the tree over, or using a mechanical devise to pull the tree out of the way. So in summation ... where we come from basically we want to maintain employment for our people, myself, and the people that I represent are the people that I work with are very sensitive to the environment and those are the kinds of things that we discuss amongst ourselves. I think that if there is an addition planning for the area, that some of those ideas may be put into practice in order to make it a cleaner way to log, and do the least

possible amount of damage to the environment. If thre is any questions?

Panel comment:

Thank you very much, I appreciate it Nick, I think we have some questions aimed at just getting a little more detail about some of the things that you've said already. I appreciate you making a great effort to stay within the time limit. I know that you had a great deal to offer there. Ian do you want to start again?

Panel comment:

I have a feeling Bill will address what is probably going to come out of this plan, planning review process which in the end we may be developing some form of what's called a Total Chance Plan, but I prefer to call it Total Integrated Resource Plan which basically means road development will have to come first if you are going to access the area, how you do it, and then identify all the resource uses and how do you develop it over time. Bill may also want to discuss basic harvesting on steep harvesting on road development on more steep side slopes. I am just going to make one comment to you that I think we are going to endeavour to do better job of, and the company already is doing a better job of stream side harvesting. Hopefully, at the pre-harvest silvicultural protection, sorry preharvest silvicultural planning stage, the sensitivity of the site adjacent to fish creeks is identified, the need to leave the appropriate amount of trees is suppose to be recognised through the application of the Fish/Forestry guidelines. We simply, I think know from the fisheries point of view that we can still do better, achieve more it is up to the licensee themselves to help us because can't out on all the site inspections, but I said if there is some particular sensitivity involved adjacent to a fish creek, then hopefully, that gets notified to us we try to pick it up 5 year planning stage. But in relation to that, you talked about alternative methods should be implemented near fish streams. Do you wish to elaborate on that for our interest? Either through your written submission or verbally now?

Response:

Well, basically what you can look at besides fish streams is to have sky line logging. Now the term sky line is old, I guess what we use nowadays is long-line logging, simply it means that you anchor your running gear perhaps across the creek maybe 300, 400, 500 feet away, 1,000 or 2,000 who knows, but using a method where the logs can be lifted out rather than dragged through the soil itself to minimize the soil erosion. If the road is close to a creek for instance, you could use a super snorkel to lift the wood out itself rather than dragging it. To use a high lead machine beside a creek, I think doesn't make any sense anymore or grapple yarder because unless you have good lift, the tree will be at least partially disturb the soil. If we can get away from it, we are doing a better job. Mr. MacDugal those items I brought up by know means were meant as criticism toward anybody. It is simply to try and assist, to make the best possible plan for the area that we are discussing. It wasn't meant as criticism, if you picked it up that way I apologize, it wasn't meant like that.

Panel comment:
That's alright. I'm just trying to fill in the pieces here. We have, you know, endeavoured just in the last two years to do better job of stream side logging up above the lake, in which case a specific riparian zone was walked and we determined which particular tree should be selective felled out and then because we could get a hoe chucker I suppose, in there to grab on to them to pull them out, there was minimal damage done but there was a specific zone that was left. Anyway, then just with regard to sky line, I know, CamFor has one up in TFL 37 that is in operation, we are going to look at that this summer and determine the feasibility for working around fish streams. Once again I think Bill is really the person who is going to have to address what the company plans are around there, but we are certainly aware both sky line, super snorkels and actually just good grapple yarding, so it is something we hope will be addressed in this plan. I will just leave it at that.

Panel comment:
I have a couple of questions Nick. Again, just aimed at getting a little bit of understanding of some details. I appreciate the information you gave us on the employment levels and the number of staff. There is a couple of questions here. You mentioned four important items here, concept of recreation in the valley, visibility and visual concerns, fire protection and access to the whole valley. By access I take it you mean like a proper road network that would allow access to the entire valley. From a fire protection standpoint do you have any personal views on how present levels of fire protection or fuel management might be improved, like ... what do you see in the future? Or, do you have any thoughts at this point?

Response:
Unfortunately, I am probably the wrong guy to ask because I got stuck in every fire we pretty well had, never get enough. To me if you look at an area that size if you do have a proper main line, or main lines it may be a matter of two roads or more roads, I couldn't tell you I am not an engineer. At all times during the summertime there should be a water resovoir available, rather than having to tank truck sitting somewhere in a junction that should not be sufficient for us, there should be water available right through the summer. This may be something to look at in different areas, really we are very fortunate in that particular area that we have many lakes. I don't think we do have access to all water the further you get up the valley, now I haven't studied it that closely. If

there is water available it should have access to it to make sure that in case of a fire that we can hit it immediately, rather than go into another Taylor River disaster.

Panel comment:
Ok. So the existing tanker system which water tankers are spotted around the valley you think that could be improved upon, is that your view?

Response:
Yes, I think the particularly large, again any large area should have access to the water itself. Now if you look at Elsie Lake, Dickson Lake, June Lake, View Lake, they all have access. You can drive there and pump your tankers full, I like and when you look at a large area like this it should have access to water, easy water, rather than to have a tank truck sitting out somewhere and hope we don't get a fire.

Panel comment:
That is fine. You've answered my question there. Thank you. I think I understand your point about the whole valley as I mentioned, accessing the whole valley. You think that we should put in the main line roads to give ourselves more flexibility to distribute harvesting and what not, rather than simply opening up one portion of the valley and harvest and then move on. Is that correct?

Response:
Absolutely, I think that if the ... (tape ran out)...tape changed.

I don't say that we can hide logging or should we hide logging, but we can sure as hell do a lot better job than making large clearcuts. We should not be allowed to make large clearcuts. It doesn't make any sense if we have access to the whole valley there won't be no need for it. It is a matter of having the costs of someone paying for the costs of road to get there. Quite frankly, I don't care who pays for it, I guess M & B if they're going to log it, they will have to pay, if forestry wants to pay for it then that is fine with me, although I am a tax payer.

Panel comment:
Right we are all tax payers. You talk about clean logging, now I know that we had a time during the 80's when markets were poor and utilization levels were relaxed and many British Columbians know about that and they are not too happy some of the results. If you can think in terms of today's level of utilization, do you feel that there is room for substantial improvement in the Nahmint Valley?

Response:
Well, I don't want to come from a critical area, when we go back to the 80's, the Sproat area was logged like it was in the 70's. It may have been some what relaxed on the diameter itself of the tree, six inches maybe versus seven, but what

was allowed to take place in the Kennedy area i.e. Millstream Logging, BCFP, now Fletcher Challenge, the Doman's what was allowed to take place at Bevans at Port Alisa so what I don't want you to get the, I am not throwing rocks, but what happened, happened. That did not happen at Sproat Lake Division. You see people look at all loggers like they're animals and they're out there destroying the whole wilderness and in fact at Sproat Lake Division that did not happen. I don't want to dwell at all, but if you have driven out Tofino Highway and when you leave Port Alberni and look off on the right hand side, on Branch 22, I fell a large area in there myself, it looks beautiful in there. When you go down Hydro hill, that was done by BCFP. So there is a difference, definitely and when people want to do a nice clean job, it can be done and you don't have to hide. As a matter of fact, some of the crews are quite proud of the achievement they had in that division. There is a thing just off the record that, is just, I want to get it off my chest. I worked in this division pretty well a life time. You know the fish streams in there are, to me in good shape, we have a hell of a run of fish going off to Nahmint and the Canal. The creeks haven't been destroyed. Sure as hell that the industry, the early days didn't do the job they should have done, but if you look at the overall valley, it is in pretty good shape. I think we should have done more in forestry. I don't want to talk about it today because it is my pet project. I am very unhappy when people don't do a lot on forestry, but if you look at it objectively what happened in the 80's did not happen in Sproat Lake. And certainly not to the extent it happened anywhere else. So when you talk about responsible logging that in effect did take place in the Sproat Lake Division.

Panel comment:
To understand you better, your point is that poor utilization in a broad sense has caused many people to be very concerned about developments and that has impactedon everbody.

Panel comment:
Right, you mentioned long reach yarding system, I wanted to ask you a question. I have had engineers, not necessarily MacMillan Bloedel engineers, but many times I have proposed long reach yarding systems as an alternative, knowing full well they're more expensive to operate in many cases than some of the alternatives. One of the arguments I have had over the years has been that well the trouble is we just can't get crews to work on those machines. We just can't get guys that will sign up for that crew. What is your personal experience with crews working with long reach systems? Do the logging crews tend to avoid that type of show?

Response:
Let me answer that with a question. If you have a job that

has potential of making 40 or 45,000 dollars a year. First is welfare, what is your answer?

Panel comment:
I'll go where you send me.

Response:
If we take a look, if that would be the case, then we would not have one tree planter, we would not have one spacer, and you sure as hell wouldn't want to be a faller because that is pretty labour intensive work. It's malarkey, really. There is, back in 60 I worked at a skidder setting in Franklin. I was a young fellow then and still around today and I intend to be around a few more years. I assure you that after your equipment comes to our camps that our crews will work it.

Panel comment:
Thank you. That is all I have, are you aware that there has been I think it was mentioned there has been some hoe chucking which is an alternative harvesting system along some...

Response:
Yes, I have seen it.

Panel comment:
That is all I have, Bill do you have any questions?

Panel comment:
I think you have pretty much summed up most of it. I did have some queries on when you were talking about better harvesting, but I think you have pretty well clarified those in your further comments, Nick. And as Ian said earlier I agree with you on the long term plan. I think that's a necessity and that will come out of the Nahmint Plan, I believe when all the open houses are finished, that there is going to be a comprehensive shopping list and that long term plan is going to keep coming up. I was pleased to see it. To summarize your main points of naturally employment the better harvesting and then the road construction those are your key points and we will certainly look after them. Otherwise you guys have dealt in pretty clearly.

Panel comment:
Ok thanks a million Nick. You will be making a presentation next Saturday in Victoria?

Response:
Yes, thank you gentlemen. Either or myself or somebody taking my time slot.

Panel comment:
I think we have.

Response:
Mr. chairman I'm a visitor from Alberta. I was wondering if you could give me a couple of minutes?

Panel comment:

Mr Watt you ask for time to speak, would you like to let this other gentlemen make a presentation. Yes, certainly if you would just like to come and identify yourself and give us your name and address if possible sir, and then you have 15 minutes.

Jim Rogers
7102 Beaulieu Ave
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I am the chairman of the environment committee of the Alberta trappers association in Alberta and I live in Fort McMurray. My address is 7102 Beaulieu, T9H 1B1. In the east from you it would appear that there is galloping forest decline and there is some concern that what is happening is in fact, global long range pollution and that it is in fact a very unknown world that the forestry industry is going to be working into in the next decade and there could be some very rapid, very serious and weird effects showing up. I think if anybody was to delude themselves to believe that what is happening to the tops of the young conifers is something to do with the seed or the planting technique or something they might be kidding themselves because it is in fact proceeded across the prairies in Alberta in the forests and the trappers are really quite frightened at what is apparently going on. We would have to, the trappers, look at the problems with the forests as indicative of a general environmental stress and then that the trees maybe an indicator to us of grave other injury that is going on; possibly around the world. I bring to your attention that the pollution from Chernobil's accident was detected in Denver within 24 hours. That would lead us to believe that problems in China or Europe will be here on your shore in probably say 20 hours and that should be seen to be as some grave concern. At first we were lead to believe that the spruce bud worm on the East Coast was a particularly rank little bugger that was devastating the forests. It is now generally accepted that as the forest gets stressed possibly the forest suffers more than a lot of other features because the trees have a natural thinning process. They seems to be quite sensitive to stress and that the individuals that stress out then lose their ability to defend themselves against natural predation and they fail leaving the other trees around them in a basically whole condition. What we are now seeing in Alberta is huge infestations of poplar borer, tent caterpillar, numbers of other insect and fungal infections, suddenly sweeping through the forest and it is sort of heartening to see the trees coming out in leaf bravely when they are just eaten up by poplar borer and the sap is just pouring out of them. We have a big problem in Alberta because the poplar tree is so central to life on the prairies it is almost the only big tree. You people are really very lucky being on the west coast and having such a diversity of trees, but I really would caution you about making any big commitments or making any kind of commitments that your locked into, into the distant future unless you really have some solid information that the regrowth and regeneration really is working and is going to work in the future. I have a grave concern about what happens to the animal population when an area is logged. We've bounced around using the planet as a sort of a test tube and the tests have mostly failed and mostly been a disaster. It would appear that there is a huge amount of money involved in sort of gutting out the resources, whether it's packing up the buffalo tongues or sweeping up the oil or the black top soil the was deposited by you know a million years of buffalo being decimated in a few decades. Maybe there's something of the same thing going on and in the near future these kinds of assumptions that, that is the correct utilization of our resources should be or will have to be re-examined. I was kind of interested that in the other room there was some mention of trees at 70 years old being immature assuming that after 70 years old that they are mature. I would think that we would be doing well to be looking at trees that were decadent or near decadent and pulling them out with something like a sky line or a balloon mechanism or something like that, that would minimize damage to other younger trees around and then you'd be looking at a cycle of harvest that would not be based on this block is going to all come into harvest at sometime in the future and were then going to go through the gutted forest syndrome again, but if the decadent trees were pulled out and the younger trees were allowed to stand then in maybe even a farely short number of years a second, third, and fourth harvest would be able to come off consecutively. I will bring to your attention that the forest industry, it was the people that are recommending the pulp mills for the north of Alberta, told our forest people that they would not invest anything in any improvement or changes to any of their operations unless they were guaranteed of a 20% return on investment. Then in a subsequent answer to a subsequent question they said in order to secure this lucrative contract we will do and promise anything, pretty well. We can come up with the technology if we don't have it. That throws the onus entirely on your department to see that they are required to spend or design the kinds of mechanisms or facilities or procedures that will guarantee. Usually, looking after the environment in Alberta has meant the creation of more jobs, better jobs, more safety, and a better environment for everybody. The thing that we've also come across is that if you allow that one group or one industry designs a harvester utilization, other users might very well be left out and say for example, to the wildlife we want to leave as much litter on the ground as we can because thats in fact, forest cover and habitat for the wildlife and at same time not leave a disaster that no animal can move through including a human being. And the effect, let's see, there is some sensitivity required I would think in the future and maybe somebody should be sort of firing some warning shots to say look this is the way things are going. I was particularly horrified to see a tree with an eagle nest up at Bowser, one single tree standing in a 40 acre patch of clearcut with an eagle nest in it and it is a black eye to your government, your industry, your department and me as a human being that such an insult could be allowed to even be considered. There is a possibility, I just go back that, the utilization I wanted to just to bring to your attention. That in utilization it seems strange that anybody would consider utilization of virgin growth forest that would be less comprehensive than what they intend for their regrowth forest. If they're planning to utilize down to a certain size in the regrowth forest then why would they do otherwise in the prehistoric forests. The one little thing that kind of harks back to what I was concerned about, with forest decline which is a euphanism for ... the forest of the planet seem to be dying. If you were to go home for Thanksgiving supper and discovered that half of your family had cancer and were dead would you call it family decline. I have a hard time with that. There is a possibility that the environment could slip out of control from a greedy management team and we could enter into a self perpetuating or self accelerating environmental collapse which we all might want to regret later on and we might say well you know we didn't respond fast enough on CFC's and ultraviolet played a role and 100 other factors. But to move fast and to make long term commitments could be a grave error at this time. Thank you very much.

Panel comment:
Thank you very much, Jim. Bill do you have any questions?

Panel comment:
I would just like to comment on the decline of the forest. Jim I am a professional forester and I would certainly welcome your comments on the forest that maybe in decline, but I haven't noticed it in our area and perhaps in the prairies that is the case, but in our younger forest here and in some of the juvenile and mature forests there are pockets of decay and pockets were they are on decline, but it is not a general picture that I am aware of.

Response:
If I may just help with that. There is a book that was put out at each year, there was one 1989 that talked about the predation in the forest in western Canada and predicted what would happen in 1990. It somehow overlooked Armillaria root rot, it overlooked the poplar borer, and one other phenomenally successful insect group ... I can't put my hand on right now, and amazingly enough I had this thing in my hand well at the same time I was seeing that the poplar borer was really decimating the Aspen Forests and the poplar trees of Alberta. I bring to your attention that there seems to be a problem with the leaders going very very long on a lot of little conifers and regardless of their personal genetic

history a lot of them seem to be dying on the top, primary bud and turning out with a multi-top and those kind of things. There's another one that we noticed in Alberta, and that is that fir trees seem to develop. It starts with a little part of a branch turning bright rusty orange and then that turns into a hand of the branch and then you see another one here and there and then the whole tree just turns into a rusty brown colour and that's a phenomenum that we have never seen before. In the Jack Pines as a trapper, I moved through the trees and I will see in a stand a tree starts to turn a very slightly different colour of blond and then that blondness starts to take on a kind of a yellow hint and then the tree is out of there and I'm seeing huge stands of trees because of the difference in impact as you move away from a road. We are seeing that on the east side of the road the trees are in a more stressed state that on the west side and as you move a 100 or 200 feet away from the road you see a change in their status and if you try to look at that you might discover some interesting perceptions.

Panel comment:
Thanks Jim. Jim have you brought that to the attention of the Alberta forest service by any chance or your association?

Response:
I did get in contact with them and their people.

Panel comment:
They usually like to learn about those things.

Response:
Well, I am looking toward them for expertise. We have a problem in that so many of the experts and qualified people are employed by government and industry and somehow their employment has compromised their citizenship and their human rights in Canada. This is something that we're trying to work out there that it is an extremely bad time in human history to have all the information and the expertise and the experts compromised in that way that they can't participate in their community.

Panel comment:
Can you tell me more about the location of that eagle nest in Bowser. I know that you are a visitor here.

Response:
There is a road off to the right to a place called Deep Bay and as you approach Deep Bay it is on the left and there is some discussion in the area as to whether it should be left there at any peril as the flag of incompetence that it would be, or is, and there is other people saying it should be taken down because it is an embarrassment and the eagles may return to nurture another family there next year and then it might fall with the young in it.

Panel comment:
Thank you, I suspect that the tree is growing on private property, but I am not sure.

Response:
Yes, it is a dead tree. But then we can move into this horrendous idea that somebody would suggest that all of our forested land should be privatized and then some other rules of discretion have to be put in place to compromise peoples ownership of what is basically our resources.

Panel comment:
Thank you very much Jim. Do other members of the panel have a comment or a question?

Panel comment:
Just two relatively quick ones. The follow up to the Bowser scenario that under the provincial wildlife act it is now an offence to destroy an inactive eagle nest tree as well as a active nest tree. It therefore will remain standing unless it is jeopardising human lives from a safety point of view. I suspect that it is on private land. Now point number two concerning the protection of such trees, I am on the provincial wildlife tree committee, we are endeavouring to come up with suitable leave management strategies on a provincial basis, which will adequately protect those wildlife trees that are deemed important. And that will be applicable to crown lands for starters and if it is up to the goodness of a private land owner that sees something good happening on crown lands and can therefore apply the same leave strategies, such as the Bowser scenario and so be it at this particular time we don't have that procedure in place. We are endeavouring to do such. Secondly, the number one objective of the wildlife branch is to maintain the diversity of wildlife habitats for the diversity of all species. To this particular end we are endeavouring to ensure that respective plant communities are represented throughout a watershed and when I refer to plant communities that in particular context of forestry refers to whether it is hemlock, balsam, with a little yellow cedar intermixed or whatever. We would not therefore be in favour of last stand of yellow cedar being wiped out in the watershed for example. So therefore it's up to we as Ministry of Environment to do better job of looking at the current forest cover and ensuring that there is representation of all necessary plant communities and probably the best way to do it is through a corrdior effect running up slope, down slope, and along reparian areas. It is something that has got pushed to the for front in the last couple of years. Pretty well because of the public, but it is something that we are just trying to do a better job at meeting our mandate right now. The provision of hunting opportunities dropped down to number three as our objective shall we say. Thanks for your information.

Response:

If I may I just ... to put in the terms that you've used there is a problem with a thing called the edge effect and fragmentation and if a wave of clearcutting ...

Panel comment:

We are quite aware of such.

Response:

... or forest harvest has been done it will affect, according to its sensitivity, it will affect the number of years that those kind of effects are applying to different species and probably the most devastating one would be clean clearcut and then a anything that removes the forest cover, but as the forest comes back that edge will start to disappear, the different species in a rotation and suspicion is that if it was sensitive done there might be virtually no disruption after the initial noise and confusion.

Panel comment:

Thanks a million Jim. I appreciate your comments. Now may I just confirm your address: 7102 Beaulieu Avenue and that's in what town?

Response:

Fort McMurray

Panel comment:

Fort McMurray I am sorry. You did tell me I just didn't note it and it's T9H 1B1? Thank you very much...we will send you a copy of our draft recommendations.

Response:

If you did have something kicking around that might be of interest to me or assist in any way I can assure you that we are all working together to have the very best possible environment in the future for.

Panel comment:

Them guys.

Panel comment:

You betcha. Thanks Jim. We have one other person who would like to make a presentation now, Mr. Watt is it. Would you like to come forward. Just give us your name and address please.

Mark Watt
Harvest Home Kitchen and Workshop Society
c/o Brian Cyr
265 Pine St
Nanaimo, B.C.
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I guess I am kind of representing the other half not necessarily the loggers, but we have a non-profit organization it's Harvest Home Kitchen & Workshop Society and the idea is alternative sustainable kinds of harvests that are available to us as a culture, a civilization, that's dealing with the time the now, 1990. There is definitely things happening in the world, I am from Toronto originally. I have done a lot of travelling on the western continent. I have seen a lot of different places and other kinds of industries and form of sustaining life whether it be tourism, textile industries, automotive, all kinds of industries that are available. The thing is out here and I have never been a logger, I live on like $4000 a year, I hear these loggers talking about not being able to live any less than $45,000 a year such. There are a lot of people that aren't loggers. There are a lot people just exist and we are part of the planet and trees are an everyday thing. Though paper products and different wood products come from logging it is an essential part of life to build and construct houses and paper and such. We need these forms still. There are all other alternative things that we can use the land for like we can live with the land and there are other alternative logging forms too that were mentioned like there is an alternative logging program happening in Sweden and they seem to be doing fairly well with that I understand. The thing is that the planet kind of getting to the point were it is, we need to set an example. The planet is starting to deteriorate around us and the people are starting to get concerned and speak up. They are afraid for the planet and whole human race isn't going to last maybe last 100 years and they are in great contemplation about it any ways. So if we can set an example for alternative harvesting, also maintaining the logging industry and employing who we can through that, but who and not necessarily is a logger or who can operate in that form, we can provide other harvesting or marketing facilities. We don't necessarily have to turn to textiles and automotives we can keep the island very natural using the ferries, we can use sheep, we can use other agriculture forms, we can use recreational and tourism, those kinds of developments. We can also be forerunners in setting an example environmentally, but also in developing as a culture, taking care of our community with feeding attributes and such and also with counselling like help using these lands for stress management and different educational programs. Now a days because of the industrial era. We are kind of separated from the planet so what we can do, you know and being responsible locally, is take the people that are having problems, take them out there and show them what it is, where we come from and different things that we can do. They have kind of lost contact with themselves. They don't know how to manage in our society because they have been separated. So what we can do is take them out do nature hikes also re-educate them on growing vegetables and different plants and different states that they do go through. Because we are so use of going to the grocery store and it is provided for us. What we are getting is something that the industrial era is providing on a mass quantity it has quite bleached out the land .....out the vegetable fibres are bleached out in a large form because they can't have bacteria and so if that doesn't live well it is not necessarily, it brings, the quality of the fibre and it's nutrition down that we feed on as a national entity as human beings. What we need to do is re-educate the people that you know "You are what you eat" a better body is a better mind. Simple phrases like that are very true and if we can do better sustaining of our era and our environment our food and such, we are going to be healthier people. We are going to be able to provide a healthier environment and communal projection for the rest of the world if not the rest of our province. It depends on what level you want to look at it. But an alternative employments we know that everybody needs to eat and we want to treat everybody fairly and make sure everybody lives a good life. We don't one person living high on the hog and say well this person doesn't matter he can grovel on the street let him live on bleached bread and coffee that is not going to give us anything for as a human attribute to help our community. So he can take care of himself and we don't have to take care of him and have to spend $20,000 a year to taking care of somebody who could take care of themselves for maybe $5,000 a year or $10,000 a year. So I am just trying to say that there are other alternatives, I know that the logging industry is an necessity and such, but we don't necessarily have to go into the Nahmint and log it, like clearcut it, and do those things. We can do other things and this is the time to be responsible and say hey there are alternative ways of employment and environment sustainability. I think that is really all I have to say, just a little bit of the other side of the coin.

Panel comment:
OK, Thank you. Do you have any questions?

Panel comment:
Just one specific request Mark. As per our previous discussions and then what you are following up with here. If you have specific mechanism that you can identify such as ..... specific sites that you recommend for berry picking is there a specific industry that you could see being established in Port Alberni or would it be in Nanaimo based for example. Please identify them if you think that some innovated trail building for some new recreation will be valuable. Identify them, try to do your best or try to let us know the need to look at alternative things so that we can as I said try to identify them.

Response:
This is my first step I am just reaching out meeting you and we can start working on developing project designs, board of directors will sit down with the membership and identify what the community would like to see and develop and then can and having some feedback from you, knowing what areas are available and we can check and do some research and maybe present some alternative projects.

Panel comment:
I think the options are still open for the Nahmint that there is lots of potential to do.

Response:
Like I said this is just the first step.

Panel comment:
Thanks

Panel comment:
Mark when you started out I was having some difficulty when you were talking about alternatives. Now, are you talking alternatives to types of logging or are you talking to alternatives from logging all together?

Response:
Well, I think that there both can be provided. I think that the alternative of types of logging like not logging too close to the watersheds, leaving undergrowth for the small creatures and our animals and such and then other alternatives like bring I hear that some people were raising second generation of forests with sheep and we can provide employment and also alternative like I guess we could use wool and stuff like that. We can create a textile industry I mean the Scots have been doing it for many years they have been living on this little island and we see people who have been living on little islands for a couple thousand years and they still have really good forests, they are doing good forest management that's sustainable plus they have all these other things, like the agricultural sheep and that. I think that we are young country and we trying to fit in and we are trying to do it as fast as we can because we are geared to the western concept of the industrial era and we are not quite, we are a little unsettled we haven't got 2,000 years of culture behind us and such like that. We just have to if Canada would basically, the constitution was brought from all these other countries and said this looks good and looks good from this country, and that doesn't look so good from that country and we put it together and this is was the new constitution, new world and such. Now we are just trying to iron it out we may have gone a little too fast. Maybe we we've got to take a step slower and say ok well you known, we all need to live and eat and exist and such, but we don't want to wipe it out. We would like to set an example to for the rest of the world I mean this place isn't the world but it is looking pretty scary. I go to sleep every night going I can see those trees going down in the Amazon and I've got no control and I know that the sun is getting hotter and summers are getting longer. There are definite attributes that are happening because of mismanagement ... falling from clearcutting a lot. We need to take care of the planet I wanted to say that. The planet is really number 1. We're just a bi-product of the planet in

a sense, but we all don't see ourselves as that but we are, in the same sense and we have to be responsible for this earth that we have access to. It is just a little bit of reviewing I guess.

Panel comment:
Thanks a million Mark. .... on the side, I was involved in that sheep project and it worked out. For those people who are here today, we tried sheep grazing on some second growth areas, a plantation area near Bowser and this is an area where we couldn't use herbicide. Largely due to local public concern and it worked out better than we hoped. It seems to be quite a viable method and we are certainly hoping to continue to try and use sheep in future. One of the things we are now in need of is more shepherds, so if you are in line for a job. The sheep have to come from Alberta and the trick is to have a skilled person who is really committed to seeing that the silvicultural objectives are met, that's the secret.

Response:
Some more research needs to be done.

Panel comment:
More practice. Thank you. Anyone else who would care to make a presentation at this time. Otherwise we will adjourn to the room next door those who wish to and thank you very much for your presentations and for your attention people. The next open house meeting will take place on Saturday the 25th of August at the Sherwood Park Inn on Gorge Road in Victoria and there will be a 3rd meeting at Port Alberni at Echo Community Centre Sunday September 9th and we will have a field tour day available for people on September the 8th which is the Saturday following the Labour Day weekend and members of the review team will be available in the Nahmint Valley for those people who care to come out. We won't be able to provide buses, but those people who may choose to car pool or otherwise find a way to the Nahmint that day, will be able to talk with us about management of the Nahmint right on site. For more information you can contact the Forest Service office in Port Alberni and you will find out the adequate information about our phone number and that in the next room. Thank you.

Monty Mearns
IWA-C
Local 1-85
4904 Montrose St
Port Alberni, B.C.

Initially I wasn't going to read our brief in whole. I sat down early and went through it again and thought I try and make a report on the written report. It is very difficult to take a whole bunch of subject matters and put them in writing, it becomes quite lengthy, as you can see. Having said that though, I feel that it is important that I do read some of the report, I want to explain before we get into the presentation as it were, that I hadn't fully read terms of reference and to lead up to this business and in not doing so what we as a union as far as the Nahmint drainage is concerned, we would deal with any drainage or any issue or any area in a similar matter. However, each area is individually on its own merits and obviously there is different geographics, locations, drainage, elevation that make them unique. So having said all that I think that I probably will read most of the thing, particularly the key points. The introduction is self explanatory. We are the IWA. We represent the working men and women, not only in the Nahmint drainage of Sproat Lake Division, but the entire work force that you will find in TFL 44. Our local union goes from the Nitnat triangle in the south to Kyuquot in the north. Some of you on the committee obviously understand and know that. However, we feel that in recent years that the public,... I quote "public" it sometimes you wonder who the public are, but be that as it may that the forest use of forest tenure is in the public's eye and we feel that as the official representatives to the employees that we must play a very important or strong and hopefully and important role in the process.

In opening in the introduction I would like to state at this time and the report will mention it on 2 or 3 occasions that being that 1975 what it was politically and times being what they were and being that it is 1990 now, is that we are very concerned in 1975 that we were not involved in the committee, your committee, that you guys are sitting on there. We were concerned in 1979 & 1989 there was revisions made and again the IWA was not party to the committee process. I understand that these hearings are informal but so was the Carmanah at one time informal and so was every other dispute or conflict area in the province. So having said that the none of us in this room know I suppose were this thing is going, they all start off informal and once government grabs it, away we go. We must make the statement that we want to be involved, we insist and we expect to be involved in any committee process that comes out of this.

I want to talk a little bit about the history of Nahmint drainage, as it effects the entire operation of the Sproat Lake Division. I will, probably the best way to do that because there is some figures in here I will simply take it right off the draft. The Nahmint drainage area is located in southwest corner of M & B Sproat Lake Division. The valley is 22 miles long and drains from the Mount Klitsa area into Nahmint Lake and then south to the Alberni Inlet. Nahmint Valley represents approximately 13,000 hectares of old growth forest which represents 34% of the entire old growth volume of Sproat Lake Division, which contains approximately 38,000 hectares of old growth timber. The Nahmint Valley plays a very integral part of the old growth harvest level for Sproat Lake Division. The valley not only provides winter logging sites but has potential for transitional logging opportunities between the winter and spring months. M & B and/or its predecessors have been harvesting timber in what is currently known as Sproat Lake Division since early 1900's making it one of the oldest logging operations on the coast. The balance of fibre, old growth and second growth is approximately 50 - 50. The second growth stands are not yet up to rotation so the balance of old growth is very important to sustain industrial activity and jobs in the division.

I want to try and clarify some of those statements. It is very difficult, the nature of MacMillan Bloedel 1990 over the years, the mergers, Bloedel Stewart and Welch, and Alberni Pacific Lumber Company, HR MacMillan, and as years have gone by there has been recent mergers too. We have difficulty trying to establish an understanding of harvest activities for Sproat Lake Division. We feel pretty comfortable with the comment that Sproat Lake Division is the oldest operation of MacMillan Bloedel in terms of logging, within the entire company and I think that it is probably safe to say that. Having said that it becomes real important to understand how the Nahmint drainage, how that fibre in that area geographically tied in with the entire division becomes very paramount. You're not talking Franklin River and your not talking Menzies and Kelsey Bay and Eve River, your talking about a place that has had harvest activity since prior to the turn of the century as a matter of fact. There is a lot of comment that the Nahmint should be removed and set aside and it should be harvested on a sustained basis for the valley, period, and I must address that we don't support that concept because that will not make that division as an entity supported. It will do nothing for us but remove jobs. Sproat Lake Division currently employs approximately 250 hourly employees, all of them members of this local union. The AAC, in the division is currently at 490,000 cubic meters and harvested on a sustained basis. In 1982, 83, management in the operation made a conscious decision to reduce the cut levels. The cut dropped from a high in 1979 of 683,000 cubic meters to current levels of 490,000. A heavy price was paid. The crew sizes cut in half and 250 employees were thrown out of work. The licensee felt the division was over cutting could sustain a better future and long term employment for the remaining crew. It is unfortunate that the working men and women pay the ultimate price for poor planning. The IWA Canada does not support over-cutting in anyway shape or form, we believe in the sustained forest management and believe that these objectives are currently being met by the licensee in Sproat Lake Division. The Nahmint drainage area must continue to be included in the AAC of the division. Deferment will mean certain unemployment. In 1982, 83 this was very difficult in the report for me personally, I am from the division. I worked there prior to going into the union. When we were faced with the cuts the local union took a very strong position, we were very unhappy to say the least. I guess when you are faced with unemployment and we were in a world recession, to simply to throw that many people out of work, was not satisfactory. We could not relate to it at the time. In hindsight I suppose, looking back now to 1982, 83 and ...Tebor is here today, it was difficult for him as well because both sides dug in and we were nose to nose. I remember at the time people saying that perhaps somewhere down the road you'll look back on the decision that was made here, and you will see that perhaps it was the right decision. I am not quite there yet Tebor, but I can honestly say that the cut levels at that time were too high. The reason I put this in the presentation, there is a whole bunch of organizations, a whole bunch of people and a whole bunch of groups in the province that want to put people out of work, they want to set aside, they want defer, they want to do these things and the auspices being overcut, overcut. That may or may not be true. There is not a recent old growth inventory of the province, so I don't even know how I could address that, but I do know this. The employees in that division paid a price. There was 620 IWA members when I hired on there in 1972, there is now 250. That is probably reflective to Cameron, Franklin, Kennedy Lake Division in logging. A lot of people tout ...well technology, grapple yarders, this that and the other. The fact of the matter was the recession was caused by high goddamn interest rates and nothing else. It was not technology that brought the recession on and put a bunch of people out of work. I am not going to read the 1975 Nahmint strategies, The Integrated Resource Plan. I want to comment on it. If any of you involved were party to it, I must compliment you on what I think is to be, a pretty good piece of work. We've been pretty, pretty involved lately on new forestry concepts because of the two taskforce, our local union sits on. I must point out that since the Nahmint drainage has come to the forefront, our complete local union, right now is under study. We have the Clayquot taskforce, we have the Upper Island "W Slack" it is called, and now we have Nahmint. Effectively, every harvest activity within the boundaries of our local union, is either threatened by moratorium or is under study and it does not make things comfortable for us. So the 75 study in doing the research of it, we think was a pretty good model in its day. Christ, it was state of the art, it is state of the art in terms of what some of the players in the industry are doing in 1990. Some of the recommendations in the report were specific and they were definitive. Talked about road building, talked about no side casting on 35% slopes, I believe. Talked about long line logging machines, or overhead yarding techniques. It talked about leave strips of no less than 1,300 feet I believe. It talked about re-vegetation on bridge approach, top slopes, anywhere there appeared to be barren ground due to industrial activity that was to be planted in some kind of vegetation, whether it be grass, trees, I don't know. It did not say. But in reading the 75 report, I felt pretty comfortable with what that report laid out. I didn't find it restrictive, I may have thought it was restrictive in 1975. Being 1990, and the issue of forest tenure and the utilization of fibre because under the microscope. I think that the 75 report fits today's time. I think that some of prescriptions in there and some of the sight specific prescriptions based on the 18 different geographic locations. I believe it is 18, correct me if I am wrong.

Panel comment:
That's right!

Response:
Ok, I thought that the report was excellent. I've got some criticism for the revisions. I find and I guess maybe I view in it in terms of how a trade union or union people work or what we are familiar with and the revised plan 79 & 89, especially the recommendations, are not just a little bit changed, there is a lot missing. Now some people say well what we did is, we brought it to technical terms and I can relate to that sure, maybe it was re-worded it was this that and the other. But I find that now because there is so much attention being paid to what is going on in the industry, I think that definitive programs and definitive being to the letter of law, something in writing, something that's monitored, something that a lot of people partake in. It saves a whole lot of for a lack of a better expression "pissin around". I think that the revisions made and I don't disagree with some of them, you have to appreciate the fact that Nahmint has only been industrial activity in the north end of that watershed for the last couple of years, so we are trying to speculate what it may look like in 5, 10, 15 years and that is difficult for all of us. Looking on a map and seeing it from the air is something different or trying to think what it is going to look like. The revisions I think were probably not necessary in 1990, they may have been in '75, '76, '79. They may have been for all kinds of various excuses and I can't speak for the licensee, but I caution the licensee and the committee. That I think if you don't have a definitive plan, one which laymen, like me, and different groups, self interest groups, multi-use groups or whatever resource groups that lay claim to participation in that watershed. If it is something that laymen like us can't understand, it is going to be difficult for you. Most of the people involved in the report I know were professional people

and there was a lot of technical data that went into it and so there should be. I think it would be a mistake to go away from the 75 report because it is as I say to the letter, it is very definitive. That takes us to where we think we are coming and going and the obvious question is "What the hell is the IWA talking about here today?"

Panel comment:
About one more minute.

Resonse:
I will get to my conclusion. I am splitting my time with Dave Haggard, so if I go over, we will just take it away from him.

Panel comment:
No, your both around 15 minutes.

Response:
I will just get to the conclusion in my summary. It must be however stated that the plan should be constantly monitored by a community based committee representing all local user groups included IWA Canada. We would be naive if we thought that plans would not change with the times, however, we cannot continue to proceed with a valley by valley or watershed by watershed mentality. IWA Canada members wish an end to the land use conflicts. However, it would appear that the issue of land use will continue to be political. IWA Canada members in this province employed in the forest industry contribute heavily to our collective high standard of living and wish not to be the pawns of political inefficiencies. In summary because of the length of this presentation we wish to reiterate our prime objectives that:

1) the Nahmint drainage area be utilized with proper integrated resource management plan for the area. The 1975 Nahmint water integrated resource study meets this objective.
2) there be no deferment or moritorium
3) a local user group monitoring committee be established to monitor the resource management plan.

Panel comment:
Thank you very much, Monty. Now that members of the team can ask questions. I will start with Mike Kokura. Mike do you have any questions of the presenter.

Panel comment:
No, I don't, thanks.

Panel comment:
Sandy.

Panel comment:

No, I don't as well, thanks.

Panel comment:

John.

Panel comment:

Actually, I thank you for the compliment, I was on the 1975 team that did the first recommendations and I am pleased to see the IWA appreciates that work. You might be aware that fisheries operates on the no net loss policy and that's the basis of much of our input to these kinds of plans, but sometimes a no net loss results in shortor long time deferment of areas around streams and specifically things come to mind like Island Units, high sensitivity areas of braiding and flood channels and often those areas and for all intents and purposes are removed. Can you comment on what the IWA's feelings about those kinds of deferments.

Response:

We are not hung up on... necessary, I would call that a necessary deferment. I guess what you are asking me is probably our opposition on deferments period. The study, the 75 study, as I recall made mention of such deferments. Our position on deferments is politically and things being the way they are in this province now, especially with Government Agencies, that nobody will make any kind of a goddam decision and if they do the guy over here in the sitting down at the end of the street will just pick something out of the blue and just run with it. What we are saying is that we can have no more deferments. Large blocks of old growth timber period. There is enough set aside for fisheries etc. etc. Particularly Nahmint, it is covered by the study. We have no disagreement in those kinds of terms. What we disagree in is a bunch of people not saying "don't log Nahmint, we want to study it and we want to monitor it and we want to talk about it". What we are saying is "bullshit". We've studied, we've monitored and there is a report let's go on with business.

Panel comment:

Ok, Thanks Monty.

Panel comment:

I have one question and that relates to... I need to more clearly understand what you mean by both, you talk about how important the Nahmint is to the future of Sproat Lake Division as the timber supply for the division and then you made a statement that overcutting is not supported in anyway shape or form.

Response:

That's right.

Panel comment:

Did I take it to mean that if the management decisions in the Nahmint for smaller opening size as an example or a longer rotation as another example, that might be made for to meet either asthetic or fisheries or wildlife needs. If they result in a reduced rate of harvest, in effect, from that drainage, that is acceptable, do I understand that or do you mean... that ...well I will let you describe it.

Response:
Well, the Nahmint drainage has to be included in the AAC of Sproat Lake Division period. Now we've been led to believe by some groups that there will be pressure coming forward to remove Nahmint drainage from the AAC from the Sproat Lake Division. What we are saying is we don't, we do not condone a overcut of Sproat Lake Division or Franklin or Cameron and by the way there is an overcut going on at Franklin right now and I just wanted to remind everybody about that. What we are saying is first of all there has to be an inventory of the old growth forest which we're speculative here. We fly around our people are the loggers, the engineers, the falling crews, the yarding crews. We feel that in some areas there is overcutting. We don't feel that way about TFL 44. We think that it is working on a sustained basis, however, there will be overcuts if there is anymore deferrals. There probably, as we sit here I am sure that the harvest levels are going down because of Carmanah and Meares and other. So no, we do not condone overcuts, but having said that it's got to be part of the big picture. We may take a different position on Nahmint Valley if it is set out at Sproat Lake Division.

Panel comment:
So your concern is that Nahmint not have an annual allowable cut calculated specifically for it, as separate from other lands.

Response:
And that's our fear because it is the last drainage in that division.

Panel comment:
I see your point. Thank you. Rick do you have any comments?

Panel comment:
Yeah just one it was a good presentation Monty. These planning processes are going to continue on a longer, broader basis probably. How do you feel, I think I already know the answer, but how do you the IWA feel about the deferment or moratorium on an area while the planning process is going on?

Response:
We do not support that. We haven't and we never will. We feel we can study, we can meet, we can proceed, we can develop plans, programs, state of the art, our people, our unions are willing to involve itself to the fullest. After all we have the talent in our organization, we are the loggers. We don't

in anyway believe in moratorium or set aside while a study is going on. In fact to prove study, and what we call progressive forestry you have to utilize your resource while you study it. So you know where your mistakes lie. For instance, the slide on the far side of Nahmint Lake. I think everybody learned by that, but that's not a bad slide.

Panel comment:
Good thanks very much.

Panel comment:
Good thank you. Mike

Panel comment:
Thanks Ernie. Monty, good presentation thank you. Your third objective talks about local user group monitoring committee.

Response:
Right.

Panel comment:
We are all well aware of the publics' concern about what's going on in the woods these days and the publics' desire to become involved in what's going on in what they consider to be their woods, our woods, the people of British Columbia. How do you see, if I can ask and you can answer me briefly or you could go on all day, I am sure. How do you see such a committee working. For example, in the Nahmint?

Response:
In make-up or in...

Panel comment:
Well, both in make-up.

Response:
In make-up.

Panel comment:
and then how do you see it doing the monitoring that you are talking about.

Response:
In make-up, firstly, I talk about community public committee. I believe that things being the way they are in this province right now, that the community, the respective communities based on their resource. Be it a mining community, forestry community, fishing community, etc. That the people in that affected community or would be affected community are not being allowed, nor is there a mechanics for them to have a great deal of say in what goes on in their community with their resource. Now I can preface those remarks by pointing out what happened with the Clayquot Sound taskforce. The premier stepped in, appointed a taskforce and picked three people from Tofino etc. etc.. There is people from Victoria that sit on that taskforce that claim to be landowners in

Tofino. It is the hokiest goddam thing you have ever seen in your life. The community I believe, has a responsibility and the working men and women in that community to have more say in their future, but by our political structure in this province we are not being afforded that, the opportunity to do that. Now the mechanics and the physical workings of a committee, obviously it matters not to me who the chairman of a committee could be or would be or should be. Christ, it could be the mayor, it could be the forest service, but what is important that the players of the users groups have a opportunity to sit down meet and discuss and that's pretty reflective to the way a trade union thinks. Like if people have the opportunity for input there is not so much a whole lot of criticism because they opportunity to say what is on their mind. When they don't that's when you get into situations that we are in now. Now I would see the City, the Regional District, the union, there is a environmental coalition group in Alberni, I would see them sitting on there as well. There is also a share group, forest industry, and government agencies and it would be neutral to the respect that it wouldn't have ties with government. It would monitor, self-monitor on a steady basis and follow the activities more importantly to follow the harvest activities in the valley. There is a couple of things that we are not happy with going on in Nahmint. There should be steel spars in there instead of grapple yarding. Obviously, we need a method in which to present those concerns to the licensee, which we don't have now.

Panel comment:
Thanks, Monty.

Response:
Thanks

Panel comment:
Bill

Response:
Now I am going to get her eh Bill?

Panel comment:
No

Response:
You have been waiting for this for a long time.

Panel comment:
No, that was an excellent presentation! Just to broaden on what you were talking about. I guess from the nuts and bolts I have difficulty of seeing where the public is going to fit into the planning process. Is it a Five Year Plan because you also cautioned that detailed plans, a lot of people have great

difficulty because they can't understand what's presented out there. So there is a planning process and then there's a monitoring process.

Response:
Right

Panel comment:
Are you suggesting to be involved in both? You mentioned monitoring and I am just ...

Response:
I guess it would be advantageous for the union because of our position as to what we represent, the work force in the industry. Obviously, we would partake in planning processes and we have that ability to do that now, we are afforded opportunity as anybody else is. To us, that's not the big issue. The big issue to us is monitoring and there can be amendments made to a Five Year Plan or I am not talking about the '75 study being something forever and a day because as the plan is developed and activities proceed and as years go by we may learn that Jesus, we are doing the wrong thing. Some of the slides on the way that the harvesting has been done on the first setting maybe there should have been a leave strip across on the landscape etc. More importantly is the monitoring, not so much the planning because I believe when you are involved in the monitoring your plans are going to change if they don't fit. You know the proper prescriptions, anyhow. Did I make that, you understand.

Panel comment:
Ok thank you very much Monty. If you have nothing further to add then, we will ask the next speaker, Dave Haggard.

Dave Haggard
IWA-C
Local 1-85
Port Alberni, B.C.

Thank you. I would like to thank you for the opportunity to address the panel I am not going to go through the same thing although I suppose I could read it for you, Monty if you want? I want to more talk about the people aspect of the effects of the decisions that you people are going to obviously come out with sooner or later. It seems that all to often that we forget when we deal and are put under political pressure from places in the large urban areas. When we are put under political pressure the knee jerk reaction the government usually does is that they immediately do more studies and do moratoriums, and make more parks and things of this nature and that is creating a major concern with our union because it inevability forgets about the people that are involved in the areas like Port Alberni and other areas that are largely dependent on the forest industry and we think, I guess to be quite blunt about it, enough is enough. Cause if we think that in our area TFL 44 in particular, and that there is more than enough and probably too much park lands already. We think that in the Nahmint Valley that we have the opportunity to do everything and we talk about a multi-use forest and we think that without putting large sections of that valley into a park, that we can continue to log it, continue to do things that are necessary to employ the people that are left at Sproat Lake. We don't want to see anymore decreases in the employment of our membership in that division. We don't think it is necessary, we think it would be irresponsible of anyone to lower the workforce to satisfy people that want to have what they called the wilderness experience by walking into Nahmint Valley. We think you can already do that, we had the opportunity to fly the whole valley up and down it and there is areas up in there that will never be logged that provide hiking, provide those things that are recreational, provide the necessary areas that I believe will satisfy the needs old growth forest so the wildlife the biodiversities and all of those neat things that people talk about that they say are so necessary. We think that you can do that without starting to take any part of that valley and put it into a preserved state. We also think that the '75 plan with some updating, was the thing that was good, it was probably 20 years a head of its time and John I am pleased to see that you are still around and we part of that plan because I think that it showed the foresight to be able to put together something and foresee the future that our union has been talking about since the 40's, about doing things properly in the forest industry to make sure jobs are there forever on a sustained type of basis. It is unfortunate and I guess government has got to start and its agencies as the Forest Service have got to start accepting your responsibility. You allow changes in 1979 that took away as a rough estimate, I would say 50% of the good things that the 1975 plan did. You allowed road building in steep areas that you shouldn't have. You changed and allowed the company and M & B has got to also accept the responsibilities that it is no longer business as usual as it was in the 30's and 40's. We think that the expertise is there, you showed it in '75, you didn't show it in 1979 and in 1989 you even showed it less when you did more changes and that was more cleaning up the language and I understand that, but in '79 there was some major changes done in there that shouldn't have happened. We think that taking all that aside, and I don't want to I hate to complement MacMillan, but we think that the logging that has been done in that drainage is some of the finest examples of good logging that has ever taken place on the coast. We see leave strips around the lake that has protect the fish habitat. We see, we were in there watching them pull trees over with a grapple yarder that employed more people which is obviously one of our major concerns, but also stopped the things of creating environmental damage by putting trees into the lake and things of that nature and we think that was good. We thought the leave strips along, I'd say 95% of the river is excellent. There is only one spot and we talked to Dave Bishop about it when he flew over he pointed it out to us, I wouldn't even of noticed it if he hadn't pointed it out. One area went a little to close to the creek, but 95% of the logging that has been done in there is absolutely excellent and people that would ever be critical of that type of logging either don't understand or don't want to understand or have an agenda that doesn't except any logging at all in the old growth forests. I guess in closing what I would like to emphasize is that we think that, and Monty touched on it, is that maybe the logging methods should change that we should get back into as was talked about in the '75 plan long line machines that take away from the road building necessities that create more employment, that take away from having to build roads in steep areas, because when you use different machines you can go out longer 600 feet as a grapple yarder does. Those things should be happening and we think that with that type of planning to continue in the Nahmint there is absolutely no need to save any part of that valley from logging. That we can do both and preserve all the things that are necessary that should satisfy everybody except the lunatics. We think those things are possible, we think they can happen with the knowledge and planning that has already been put in there and that should continue. In closing we sure as hell don't think that this government or the Forest Service should allow areas and people that live in the large urban areas to decide the fate of people that work in divisions like Sproat Lake and logging the Nahmint Valley, we think that is wrong and we would hope that you people don't allow those people to put enough pressure on you to preserve any part of the valley. Thank you.

Panel comment:
Thank you for the presentation Dave. I think I will start at the other end of the table now. Does anyone have any questions for Mr. Haggard? Mike do you have any comments?

Panel comment:
You are asking me too soon.

Panel comment:
Dave I don't have any questions for you either. John.

Panel comment:
No, good presentation though, thank you Dave.

Panel comment:
Mike you've had almost 10 seconds to think now.

Panel comment:
I can't let him get away with nothing. Dave both you and Monty have mentioned how good the 75 report was and you also said that it was wrong that the revisions were made in 79 and 80. Monty mentioned that the only reason those revision were made basically because high interest rates and that type of thing. Those types of things are going to happen. They are, there is just no question. I mean we're experiencing it again right now. Now how do you place your comments, Dave, in the

context of another spate of extreme high interest problems. The company having to do something to keep itself in business. Basically, what that is going to do is going to effect your group, the IWA, the workers. They are either going to lay off people or they are going to try and get some sort of relaxation in the constraints or restrictions that are applied to them in logging. This is a loaded question I appreciate that, but I am just kind of interested in see how you are going to deal with it.

Response:
What you are talking about is economics verses environmental concerns.

Panel comment:
That's right because you're basically saying that the 75 plan was good it should not have been changed period. I am saying hey there are economic conditions that force companies into trying at least make some changes to protect their own profit picture.

Response:
Maybe I can answer with an example. In 1982 I believe it was, the MacMillan made a decision and those were tough times, we were in the middle of a depression and the economics were I guess about as bad as you can ever get for any company or for people, and they made a decision at that time to bring a company out of a part of their TFL and they were called Pat Carson and they brought him out of an area and they were on Flores Island and in Cyper Division and in Beddingfield, and they brought him out there and put him in Franklin River Division. Monty touched on overcutting in parts of the TFL and the government allowed it. Rubber stamped it in our opinion. We fought against it, argued against it, got absolutely nowhere, which happens not on a regular basis, but far too often as far as we are concerned. We said at the time on Flores Island were they brought another company out of there as well because of economics. That you guys are absolutely and totally insane for doing that. You shouldn't do that, leave even if you have to, economic times as there are, leave a small crew in there so you have a presence in that area. Now we are sitting in an area that we are overcutting in the back end of Franklin River Division because we are taking 300,000 cubic meters out of that area that should have been coming out of Flores Island and Megin River System and all those areas to stop an imbalance in the TFL and it should never have happened. So I guess what we are saying is that you can judge economics and sometimes you have to do things that hurt people because of economic situations, but you shouldn't create what has been created now in part of that TFL. So that same holds true in the Nahmint as that to say that economics cause us to change things and do them wrong. I don't accept that. I don't think we should ever accept

lowering a standard to satisfy making a dollar. I think that is an injustice to the people that live here.

Panel comment:
Thanks Dave.

Panel comment:
Thank you Dave. Now I believe our next speaker, and we have agreed to adjust the schedule somewhat. I think our next speaker scheduled will be Tibor, Mr Tibor Jando.

Tibor Jando
Manager
Sproat Lake Division
MacMillan Bloedel Ltd.

I would just like to thank you for giving me the opportunity to speak on the behalf of Sproat Lake Division. My objective indeed is to limit my comments just to that, to express my views on behalf of all employees in the operation of Sproat Lake Division as to what the Nahmint area means to Sproat Lake Division today and to the future of Sproat Lake Division. For a bit of background information about the Division. Our annual production today is 490,000 cubic meters. Our land base at that the Division is 90,000 hectares. Interestly, as Monty said this is the oldest operation in the Alberni Valley, and in fact that is reflected by the distribution of the old growth and second growth forest at the division. We today on our total forest land base we handle 50% old growth and 50% second growth. The age of second growth from 0-50 years. The employment level including staff is about 270 people and it is very important also to emphasize that given the allowance for fire hazard, extreme fire hazard shutdowns and some winter conditions, our work year for our employees on pretty steady basis at Sproat Lake Division is about 200 days. Now, Sproat Lake Division is perhaps the, in fact it is the nearest logging operation to the community of Port Alberni. We draw our workforce, our staff people from the community and also I am very proud to say that Sproat Lake Division contributes significantly to the economic base of Port Alberni. In fact on a current basis we put 14 million dollars annually in wages and salaries to the community and to the economic base and about $2 millions in goods and services that the division buys from various local businesses. I like to, before I address specifically the Nahmint area or the issue surrounding it, I would like to talk about the overall factors and geographic realities that we need to consider when we develop our long term plans. Either for part of or the whole of the division. Due our geographic location about 1/3 or 33% of the division forest land base and that 33% excludes the Nahmint Valley, is exposed to the main public access routes, to popular public recreation opportunities and generally to critical public view. We have our land base surrounded by the Alberni canal that is a very popular place and then the people from the community as well as from outsiders come there to take part in the fishing and other activities. We have the highway to the west coast going through our claim. In other words as I indicated 1/3 of our total land base is indeed very much in the public view. Now, what this means to us, at the operating level that on 1/3 or 33% of our forest land base we need to and we indeed are, practising and giving special consideration to things like asthetics, to cut block and shape of the cut blocks, harvesting methods, reforestation undertaking in order to reduce the green-up period. These are restrictive practices and resulting in cost burden. Nevertheless I feel as a manager of the division and the entire operation including hourly and salary staff that we need to accept, in fact we accept this as our obligation to manage the forest in a way that will be acceptable to anybody, be it the taskforce level or the general public level.

Tape ends...Resume recording after interuption of a few seconds

.....operating plans because it has a very significant impact on the viability of Sproat Lake Division as a continuous operation at the present employment level. Although the Nahmint Valley contributes only about 35% of our annual allowable cut, the division based on our land base, 90% of Sproat Lake Division's winter logging opportunity has to take place in the Nahmint Valley. That is for the period of... a 4 month period from December to April. I don't intend to introduce so many permanent jobs lost per so many cubic meters argument at this stage, because as I said at the outset my presentation is strictly from expressing the Sproat Lake Division point of view. And any reduction in our cut level in the Nahmint valley to Sproat Lake Division represents a different problem than the usually expressed so many permanent jobs per so many cubic meters of reduction. As a matter of fact in a way specifically for Sproat Lake Division any reduction of the cut in the Nahmint Valley is more drastic or more serious. If, in fact because of the 90% of our logging opportunity is in the Nahmint Valley, we experience significant reduction in our current cutting level in the Nahmint Valley it would reduce Sproat Lake Division from the 200 day operating, level and at the full level that we are employed today, to 8 to 9 months operation with very little employment and production or economic... logging or harvesting opportunities during the 4 winter months. And I am extremely concerned that should that happen, what it will do to our people and what it will do to the viability of Sproat Lake Division and it's future to become and remain a continuous well established operation. I have been associated with Sproat Lake Division since 1978. We just started to push the main log haul development into the valley in 1978 and in subsequent years Sproat Lake Division built roads and harvested timber in the Nahmint valley. I feel as I have been associated with the '75 resource plan from the outset, that we have managed all the resources in the Nahmint valley in accordance with the 1975 plan. I think the previous speakers expressed their satisfaction and I would like to join them that I feel too, that it was a unique it was very enlightened modern plan in 1975 and I think it withstood the test of the times and also the activities of our operation in that area that by and large that plan today is still a very good and acceptable plan, and I think that as I said I am very proud on behalf of the Division and all employees that we recognized the plan that it has been a good one and we made every attempt and we took it very seriously that to live to the conditions that were outlined for us in the plan. I agree there has been some revisions that were necessary because of economic situations because there were some natural changes in terms of windthrow and some slash burning problems or prescribed burning problems, we need to change. But by and large I think that again that the plan was a good plan and is a good plan and we maintained the standards that were set for us in that plan. Now at the same time I also welcome on the behalf of the division that this taskforce is in the process of looking at the old plan and revising or coming out with a new plan. I think that it is necessary because this is 1990, and since 1975 there were many changes that took place in terms of environmental standards, environmental concerns, the public expectation, even in logging techniques, in the second growth management techniques that need to be reflected in the new plan. I welcome that and I think that is a very positive step. In closing I again I wish to emphasize to this taskforce that to the future of Sproat Lake Division, to maintain the current employment level and the economic base and it's economic contribution to the community of Port Alberni, the Nahmint valley is extremely important. In fact it is, again I want to emphasize it is far more important than being 35% of our total inventory, timber inventory of old growth. But otherwise, it is essential in that without the Nahmint valley and logging at the current level in the Nahmint Valley, Sproat Lake Division will have no winter show practically and it is going to have a devastating effect on our people, our employment level as well as on the community. So, I think that the taskforce should consider that aspect very strongly when you make your deliberations and whatever changes you will recommend for the Nahmint Valley. Thank you very much.

Panel comment:

Thank you very much, Tibor. Start again, Mike do you have any questions for.

Panel comment:

Just the mention of the second growth comes up. How far are you from being able to log your second growth?

Reponse:

We have logged some in terms of off-site or sanitation cut. It was not developing as well as projected. I think that you will see that Sproat Lake is starting to get into second growth logging in some of the areas within the next 5 - 10 years. Of course, as it is aging every year we are going to get more and more in terms of percentage of our total cut in second growth. Along with the old growth timber.

Panel comment:
And I just have one more...you mentioned that the Sproat Lake covers 90,000 hectares, is that productive land or the entire Sproat Lake Division?

Response:
That's the entire division.

Panel comment:
What percentage of that is then productive forest.

Response:
Productive forest- probably 80%.

Panel comment:
80% of the ... Thanks

Panel comment:
Ok...Sandy

Panel comment:
Yes, I do have one question. Excellent presentation, thank you very much. The question I have is a point of clarification. When you are talking about the winter show it takes up 90% of the winter show in the area. Is there an opportunity in surrounding M & B divisions to move a workforce to occupy them in winter shows such

Response:
No

Panel comment:
That's the same situation

Response:
It is not, in fact I am sure that I get the support from Monty and Dave and people here, but the way we operate really it is not. Because it is not only for, because of labour relation reasons, but I think it is not practical because the other divisions are in balance in terms of their winter show and summer show so any impact from another division would be an outside impact that would result in overcutting in some way which would be very undesirable from their point of view. Aside from the logistic ability to relocate the Sproat crew and equipment to another division.

Panel comment:
Certainly appreciate that.

Response:
The way it is now.

Panel comment:
Yep, thank you.

Panel comment:
John

Panel comment:
Yeh, I have some comments and some questions that I am sure will arise out of them. The intention of this is not to put you on the spot at all, but to clarify I think a very important question for the council. You mentioned that you fully support the 1975 plan and you believe that many of their changes were perhaps negative to that plan and in 1980. However, a meeting was held with your company in the late 1970's and which your company raised several concerns about the 1975 plan. I have just made some scribbled notes here, but you mentioned that your company was having a problem with the green up period, also the size of blocks and that it resulted in extra road construction. Also the fact that the high standards that were requested in the plan perhaps raised public expectations too much and I have to ask this question.... Do you believe then that, in fact, a return of some of the ideals of the 1975 plan, in terms of specifics on things like leave strip size and size of blocks and green up periods is supported by now the management of MacMillan Bloedel.

Response:
Yes.

Panel comment:
Ok then I have no further questions. Thank you

Panel comment:
and John just asked my question...Mike?

Panel comment:
Ditto.

Panel comment:
Thank you very much Tibor, appreciate that. Now I believe the next speaker, for those who might have arrived a little later, we have bumped the speaker presentations schedule ahead because of the relatively light turnout today and I believe the next person in order was Gerard Jansen.

Gerard Jansen
MLA Alberni

Thank you and I will be sending out extra copies. This was finished yesterday, the presentation I am about to give and I am giving this presentation on behalf of the constituents that I represent in the Alberni Region which in my constituency which stretches from the Escolanty River down to the Carmanah Valley and into Alberni which is give or take a few miles the same size as TFL 44. So sometimes its the question whether I represent a constiency or I represent a tree farm license.

The submission has to do with logging of course in the Nahmint Valley and its impact on that community. Not just on the company's profitability or the workers that work there but on the economic viability of Alberni remaining the way it is at the present time or the way has been. We have been under a lot of pressure as everybody knows since 1982 when the depression took place and if employment levels for whatever reason continued to drop in Alberni it is doubtful whether the Alberni can continue to survive on its present infascructure base. 80% of the economic activity in Alberni comes from the forest industry. If that diminishes anymore than it already has, Alberni will be in a difficult situation in order to meet it's infrastructure capabilities there. Last year we lost 1% of the population in Alberni. It also has the lowest house prices probably in British Columbia. The average house in Port Alberni last year was $34,000. So it might be developed as a retirement community because you could basically sell your house in Toronto or in Vancouver and retire in Alberni at the tender age probably about 40. So many of the problems that exist from the that diminishing population base and that difference in prices, particularly in housing and living costs is that people who are transferred out of Alberni either from various government organizations or companies to major urban centers have been in my office complaining to me because they simply can't afford to move. Selling your property in Alberni at $60,000 which doesn't even represent a downpayment in areas such as Victoria and Vancouver. Combined income in Vancouver even to qualify for a mortgage is $85,000. So one needs a substantial wage increase from moving out of Alberni in order to meet the living cost in other areas. However, I will read the brief and accept your questions.

The harvesting of the Nahmint Valley 36 kilometre long watershed, covering 20,000 hectares has been a contentious issue in the land use plan for TFL 44 which itself encompasses 1.1 million acres. It is valued at approximately $40 billion and supplies economic benefits for the Alberni region. Due to the increasing awareness of our environment, great care and caution must take place in the harvesting process. I believe the harvesting of the Nahmint Valley can become a showcase of new environmentally sound logging systems. Firstly, the entire road system should be completed before any logging takes place. This would insure that the harvesting could take place throughout the valley importance of weather conditions and the life cycle of the species that live there. In the past progressive logging has taken place as the roads continued up or down a valley at that expense of all the other values. Second, if clearcut is the method used for harvesting, it should average 40 hectares and be inter-spaced by at least the same amount of old growth. Lakes, streams, and rivers should have a leave strip left around them to protect the water course from siltation and provide shade for the marine life. It should also be noted that the large old growth trees that are suceptable to blow down in the leave strips be removed. Harvesting methods should utilize cable systems and long line, rather than the present use of grapple yarders. This would allow for a minimum of road work. The road work should use excavators and involve no side casting. All material should be end hauled. Slope stability must not be compromised for harvesting. If a slope is too steep, it should not have roads and either long line or heli logging could be utilized. Snags and nesting sites must be identified so that our feather friends are protected and have a chance to propagate. Recreation and wilderness sites should be established in all areas of the Nahmint Valley, that is... wet land areas at the mouth of the Nahmint where it enters the Alberni Canal along the lake in the upper reaches of the river and the alpine area. These should include mainly wilderness sites but at more heavily utilized areas, such as the delta and the lake, they should include latrines, garbage disposals and picnic table to accommodate longer stays. Logging should encompass viewscape harvesting particularly around the lake so as to maximize recreational potential. Log booms be constructed and placed both at the inflow and outflow of the lake so as to minimize logging debris in the lake. Boating should be restricted to canoe, rubber rafts, or cartop boats and a power limit be placed on motors utilizing Nahmint Lake. There should be no power boats allowed on Gracie Lake. Boat launching facilities and adequate parking for cars and trailers should be provided at the north end of Nahmint Lake. Fire management should be incorporated into the managment plan and remain on site, with proper access to year round water sources. There should be no slash burning. All fibre logs should be utilized. Not just the species required in the processing plants operated by MacMillan Bloedel. Alder, cedar wastes along with sub-species should be offered to contractors and wood cutters. Economically Alberni needs to harvest the Nahmint Valley. Forestry provides 80% of the economic opportunities for the Alberni region. Prior to the recession in 1982, MacMillan Bloedel employed 6,100 people in the Alberni region. Presently, MacMillan Bloedel employs approximately 4,000 people in four manufacturing facilities and five logging divisions. The Nahmint harvest will be 121,000 to a 124,000 cubic meters per year on a 80 year rotation cycle and will eventually harvest 9 to 9.5 million cubic meters in mature timber in the valley. At present 19% of the valley has been harvested this includes 800 hectares logged by rail in the 1930's and 1,657 hectares since 1975. The 40 year interval allowed the lower Nahmint to reforest and is hard to notice any evidence of logging that occurred there in the 1930's. No fibre should be exported out of the Nahmint or for that matter tree farm license #44. All fibre should be processed in the Alberni region. The holder of the tree farm license under license from the province should insure that the maximum amount of processing jobs occurs in the Alberni region and out of the fibre harvested there. It is no longer acceptable to harvest public for the profit motive alone. Competing values include not only recreation, wildlife, and ecological but also economy and infrastructure of single industry communities, such as Alberni. If any restriction in harvesting is contemplated both the company and the employees should be compensated. The time is long past when licenseholders where compensated for loss of fibre supply and the workers were not. In conclusion, the process of dealing with these land use conflicts on valley by valley basis is a poor one. At present there are five land use decision in process in tree farm license 44. Meares Island, the Carmanah Valley, Clayoquot Sound, the Megin, and the Nahmint. It is difficult for companies, the community, and the general public to pass judgement on valley by valley basis when one is not aware of what is about to occur in the next valley and the impact on the region. A comprehensive land use plan for the central west coast of Vancouver Island is a much more realistic alternative. Where from here! After the Forest Service has received input from the Nahmint plan, it should be compiled and a further public meeting be held to allow for comment on the proposed plan, before a final decision is made. I want to thank the Forest Service for the opportunity to present this submission and also thank local 1-85, Sproat Lake Division, the Forest Service and Nuu-Chah-Nulth Tribal Council and individuals of the Alberni riding for their help in compiling statistics and information and for their suggestions.

Panel comment:

Thank you very much Mr. Jansen. I think I will ask members of the panel now if they have comments. Would you like to see as you ask your question would you like to pass the written submission along between you so you might refer to it perhaps.

Panel comment:

Mr. Jansen you commented that the sustainable cut for the Nahmint was around 120,000. We've heard other people talk about the old growth that is more or less restricted into the Nahmint for Sproat Lake Division. It was unclear to me whether your suggesting that a sustainable cut for the Nahmint be your goal or for all of Sproat Lake Division and that the Nahmint be part of it. Do you understand my question?

Response:

Yes, I think that if and as I said I don't agree with valley by valley process, but if we are going to deal with it on that basis than we have to look at sustaining the cut in the Nahmint Valley on a sustainable basis which is on a 80 year rotation. If that is the growth level in that valley that we insure when we make the first cut that the last cut occurs in the 80 year period.

Panel comment:
Thank you.

Response:
The reason for that of course is the overcutting that is taking place in Franklin River which is not on a sustainable basis I believe at this time.

Panel comment:
Mike do you have any comments?

Panel comment:
Just a couple... maybe one point of clarification Mr. Jansen and maybe just another kind of general question. You have made several recommendation here based on the size of the cut blocks and leave strips. Are those taken out of the plan in terms of just basically re-confirming the plan or these your suggesting that these should be incorporated in the plan in additions to, how are these formulated?

Response:
Well, they are drawn from a number of conclusions from various sources from the Forest Service from the IWA sustainable harvesting practices and some of them are MacMillan Bloedel's own logging practices recently and from some recommendations from environmental people. It is not acceptable any longer to do continuous clearcuts. I realize that and I am sure everyone has seen the National Geographic foldout on Kyuquot and when you leave smaller leave strips and you get blow down, obviously, the best method of dealing with those blow downs is to harvest them. If those strips aren't large enough, if they aren't planned properly in wind direction and to minimize wind throw, then in fact you may end up with a clearcut that you didn't plan on. So therefore smaller clearcuts such as 40 hectares and leaving the interspacing, large amount of forest in between old growth forest it would eliminate, I believe, the continuous clearcut look.

Panel comment:
As somebody that is responsible for wildlife management I appreciate your mention of snags it is important to us for sure. Another point of clarification, you talk about the restrictions for boating, basically you said there should be a power limitation of some kind on the lake. Does this have environmental base or is this just a desire on behalf of somebody to restrict the type of boat that is on the lake, just from a recreational point of view?

Response:
I think it both has an environmental and a recreational point of view. I heard, I guess the closest example, we can come to is the Sproat Lake where large powered, noisy, wave producing, high speed boats have destroyed both the

recreational and environmental capabilities of that lake. And if we were allowed that to happen on Nahmint I think it would be a detriment vote to the recreational value and the environmental value of that lake.

Panel comment:
That is the trouble with large power boats they tend to require large boat launches, don't they?

Response:
Yes, that is correct.

Panel comment:
Thank you.

Panel comment:
Rick do you have anything to add?

Panel comment:
That is a good presentation, you covered a lot of ground. It sounds like you have also talked to quite a few people. So I would just like to ask you one question, maybe you could expand on what you think the public input should be after the recommendations are made by this committee. You mentioned something about more public input.

Response:
I believe as the IWA mentioned early a review committee afterwards and I will just want to expand on that. I think that before a particular block is cut I think that all the people that are going to be involved in that cut, that is the workers be given a viewing of that cut. Not that they are simply driven out there, sometimes as presently the case and said you start here and you end there, but that they are aware of the sensitive nature and the recommendations of this committee and that goes right down to when the road builder goes in and when the faller goes in and to when the final clean up contractor in the case of shake block goes in. Also, when that cut is complete I think that the review panel, if it is put together, be allowed to go into each block and make recommendations. If they see for instance that some poor practices have taken place, that could be then rectified in the next block cut.

Panel comment:
Ok so you are more or less talking about a follow up or review committee after these recommendations have been put forward and now are you, you've talked to a fair amount of people it sounds like and I am just trying to get the feeling, do you feel the process that is going on right now is sufficient, have the public had enough input into the process that we're doing to put forward the recommendations or do you think there should be more after this?

Response:
I think there should be more after this, I think the Tsitika follow-up is an excellent example and that could possibly be implemented. Not just in Nahmint but in the entire TFL.

Panel comment:
So you're more or less saying after we finish this a follow up committee is necessary but, to get to the recommendations and implement them we're doing all right as we are doing.

Response:
Yes, I think this is a... and I'm sorry to see that certain people have boycotted these hearings. It definitely doesn't... the process that is in place may not be a perfect one but it is the one we have and one we have to deal with. I am thankful for all the people that attend, especially those that stay to eight o'clock at night when nobody else is around.

Panel comment:
Thank you, yes it was a good presentation. Yes I appreciate the breadth of your comments. I am going to ask you a specific here, you say no slash burning...how strongly do you hold that view? If someone could make a case for slash burning on a site specific basis, show you that there is a value to it. Would you be prepared to accept that site specific decision or do you have other reasons for saying no slash burning?

Response:
I think that we have come to the conclusion, or at least on a world wide basis not on a specific basis that you are referring to, that slash burning tends to destroy a lot of the land base it encourages runoff, it does away with many of the insects, lower base species if we can call them that in specific areas. They take a long time to repropagate in those areas, leaving the slash area there...I realize that it is more difficult for replanting purposes and its more difficult for thinning and so forth in years to follow. But I think we need that ground cover and I think that argument has been put forward and I adhere to it.

Panel comment:
O.K. Thank-you. Thank you for clarifying that. John do you have any comments?

Panel comment:
A couple. I hope they are questions not just comments because I would like to get your feedback on them. I was very interested and that was a very good presentation by the way- another good presentation. I was very interested in your comments on such, what I would consider more technical issues, like your idea of expanding the road network. My own thoughts on that is 80% of the sedimentation does come from roads, we are probably not anxious to see an expanded road network in there prematurely, also roads tend to prior commit areas, once you build a road into an area you are more or less committed to the logging and usually the road dictates the shape and the

configuration of the logging. Did you have other things in mind when you wanted to get the roads in there and develop the area road wise quickly?

Response:

Well basically that once the road network is in it gives you the opportunity of logging various areas of the valley, rather than starting as has been the case in the past, put a road in-log that area; extend the road and log the next area. Whereas I think that by putting the entire road network into the valley, give you the opportunity of logging, not only in the beginning of the road network but also at the very end. So you are inter-spacing the logging activity so its not one, as visible and two not as destructive. You may perhaps get a certain species of animal and we were talking, Tibor was mentioning using this as a four month winter show, that you could actually be harvesting areas in certain parts of that valley in the winter when there is no breeding activity going on, raising of young and that could be done perhaps in the lower part of the valley and that activity of course takes place t a later date, a point in time in the upper part of the valley. So you could then move to the upper part of the valley if in fact that the fibre supply was necessary at that time and not interfere with the life cycle of the animals that live there.

Panel comment:

O.K. that is an excellent point.

Panel comment:

Can I just.. one short comment. Are you talking primarily about the arterial roads or are you talking about the entire road network when you discuss roads, are you talking primarily about the main roads or all roads in the valley when you talk about prior construction?

Response:

I think we could put the entire road network in, I realize that is an additional expense to the company before they see any return on their profit margin and of course everybody and having been in business all my life, you want to get as quick a return as possible on your investment. However, I think Macmillan Bloedel is into tree farm license number 44 on a long term basis, has been in for a long term basis and its going to become an expense of doing business in the future.

Panel comment:

I am glad that question was asked I thought you were only referring to the arterial roads. I was hoping you were only referring to the arterial roads. Your question on leave strips is certainly relevant, it is something that we have wrestled with continuously about the composition and location of leave strips, and again I am not taking argument with you, I don't feel that leave strips reduce sedimentation to any great extent once sediment is mobilized, it tends to travel quite nicely through any leave strip we put up and shading may not be such a big issue, but certainly leave strips in terms of a physical buffer to logging and preserving an atmosphere for recreational fishing and adding to stabilities is the case. Do you have familiarity with the Nahmint drainage?

Response:

I have been flown over in a helicopter and I have also travelled through it on my motorcycle.

Panel comment:

I don't believe and I might be corrected on this that blow down is a big concern in the Nahmint drainage, so it gives us some options for leave strips that we don't have elsewhere in terms of the blow down consideration. You mentioned a comprehensive plan for all watersheds and I certainly sympathize with that. I sit on a lot of different planning committees and various watershed management initiatives and it is difficult to see how they could all be combined into a comprehensive plan. Do you have any thoughts on that? What kinds of things it would address, you often if I could clarify my point a little bit, if you plan too far ahead the technology changes so greatly from one area to another plus the the interest of the people that are involved change considerable a comprehensive plan involving several watersheds by the time five years or ten years went by you would almost throw the last watershed away in the plan because it would no longer be relevant. How would you see that kind of thing developed?

Response:

Far imparticular to the case of the preservation of old growth and its to the, I think the good planning of the Forest Service in Tree Farm License #44 the company and the workers that work there, that the reason that we have this pressure in that particular area is because such a good job has been done. We have the largest collection of old growth left in a particular area in British Columbia. I think as a matter of fact I've heard it is the second largest collection of old growth in North America and because of that we are under pressure because of poor logging practices and poor management because of the last 30 years of the practices of government that we are now seeing that the last of the old growth is going to go in a very short period of time and it seems to me that if we say in the lower Carmanah in the Nahmint that we are going to save a particular stand of old growth and five years from now when we come forth to deciding on whether we are going to save any forest in the or any old growth in the Megin, that we may find that it would have been more desirable to save a greater percentage of old growth in the Nahmint, in the Carmanah, in the Walbran, whatever the case may be then we are going to be able to save in the Megin area. Plus the fact that we don't have an inventory. Now it seems absolutely ridiculous to me and to everybody else I think that is looking at the issue, that how can you make an decision on our annual allowable cut when you have no idea of how much old growth is left and that inventory I think should have been completed many, many years ago. To make decisions and say we are going to harvest the 121,000 cubic meters in the Nahmint and 50,000 cubic meters in Carmanah and perhaps 200,000 cubic meter in the Megin, when we have no idea whether there are 20 million cubic meters out there or 5 million cubic meters. So, by having a comprehensive plan we can better decide which of the old growth that is left is best preserved and certainly that has to be done on a scale from perhaps one to ten and identifying those and picking out those areas now and saying "yes" we will preserve those areas or for whatever reason. If we in fact decide to preserve a section of the Nahmint Valley now, and Henderson Lake is the next target that has been mentioned by environmental movement, we may end up going into the Henderson Lake area and saying "Hold it, it is the next valley down, but we should of perhaps saved a little more of this particular section of Nahmint because it doesn't exist in Henderson." So, yes, I think it is to look at the whole region, makes a lot more sense to me than to look at it valley by valley.

Panel comment:
Ok thank you that clarifies.

Panel comment:
I am going to ask another question. When you talk about no inventory you understand that we do have provincial timber inventory and it actually has a fair degree of accuracy over large areas. What we lack is intensive inventories on local areas that are as reliable as we would like and we also seem to lack inventories of other-than-timber values, that is one the weaknesses in the present system. Is that what you are referring to when you say there is no inventory or did you have a different concept?

Response:
No, I am referring about the entire inventory. The Bruntland Commission of course, has recommended that we save 12% of the representative ecosystems and everybody has agreed to do that. Unfortunately not too many people have done any about it and I think it is possible to increase our representative ecosystems from 6% to 12% without having an impact on the economics of the situation.

Panel comment:
Right, it is the ecosystem inventory that we lack, I think that people would agree with you there... Sandy?

Panel comment:
Yes, Mr. Jansen thank you very much for your presentation.

On your page 3 you bring up a very interesting point and that's the concept of community stability which I think that is something that we all have to look at and it is very important. Just one question coming from that are you considering something like a formalized social impact assessment being incorporated in our recommendation and in the total planning process to very closely look at how various resource development options might affect the community involved.

Response:

Yes and I think that is something that hasn't been done.

Panel comment:

That's correct.

Response:

The Ministry of Forests has made recommendations simply on the forest aspect and with very little consideration for the economic impact that that will have, if in fact the large tracks of land that are removed or put under the moratorium. I think the Forest Service in its collection of it fees from the harvesting or the public and the utilization of that public resource, should be using some of that money to offset the job loss or the economic loss of the impact of the community. In single industry communities such as Alberni, we are simply not talking about some loggers being put out of work and mill workers being put out of work, we are talking about the survival of a community. We lost 2,000 jobs there in 1982 to 1983 and they weren't replaced. There was tremendous impact on that community. In the last 3 years, the only growth industry in Alberni were those people hired in Social Services and in Agriculture. There were 13 people hired to deal with the social services that were direct impact of the unemployment levels that were reached and 8 people were hired in agriculture and those have been virtually the only documented by the manpower center in Alberni, areas where there has been a growth in employment opportunities. So I think if we are going to alter the economic make-up of a community, for whatever reason, I think that then alternatives have to be put in to see that that community is able to survive. Presently we employ 4,000 people in Alberni. It gets 80% of its income, of its economic activity, from the forestry industry. If that level, I am sure Mike will be able to expand on this, drops below 3,500 people and there is no competing industry that comes into Alberni, Alberni is seriously going to have to look at restructuring its recreational facilities, its infrastructure in the terms of roads and sewers and so fourth because the 4,000 people that now work for the employer of MacMillan Bloedel versus the 6,000 are paying the taxes that those 6,000 use to pay and not only the taxes that the 6,000 use to pay, but MacMillan Bloedel's tax role in Alberni has gone done from $12 million to slightly over $8 million, so that $4 million that MacMillan Bloedel is not paying at the present time is also being ..... by fewer people working in the work force.

Panel comment:
Thank you very much. As I understand that then you're accenting the relevance of proposing some sort of social impact assessment to understand the nature of the sociology and the economics of the area, so that we have a base upon which to work to decide what sorts of options might be available if necessary.

Response:
That is one of the things I think that should be considered by your community here rather than just whether or not you know we are going to preserve it for other uses.

Panel comment:
Thank you.

Panel comment:
Mike?

Panel comment:
I have got a couple of points of clarification perhaps, ... Incidently, I think you have made an excellent presentation. I just want to clarify a point on the roads, being probably quite naive about all of this being a laymen. You've stated it is not just your arterial roads that you would like to see in place. How do you see these roads maintained during the high rainy season and that suppose they were built and the logging activity isn't going to take place in that area in say the next 15 years. What happens to the maintenance of those roads?

Response:
Well, the same thing that happens to the maintenance of the roads that are already built. If the roads are constructed properly I think and we have the way to do that these days, that there will be very low maintenance. Certainly I have been on logging roads that have been in place for the last 20 years and they are still there and they are quite driveable and of course I have been on logging roads that have been very poorly constructed that have washed out and carry siltation down and caused floods and I think that is one of the things that I would like to see when I mention that the road system be put in place, is that they are properly constructed. The capability of doing it that is there.

Panel comment:
And the second question as you mentioned that you would like to see the lake itself either restricted, or used by canoes and say small boats, but you recommended that a boat launch be put in. What sort of a boat launch are you visualizing, something that you can carry a boat into or cement sort of a ramp, I believe if a ramp is put in then 16 and 20 footers will come in there if nobody is going to restrict them.

Response:

Well, I think a ramp should be put in because let's not forget Mike, that not all of us are young and capable of packing a 14 foot car top boat down to the lake by ourselves. There are many people that are retired that would dearly love to go boating or perhaps fishing on Nahmint Lake, it is an excellent fishing lake, and don't have the capability of carry that boat down there. So, and should we in fact say that no, just because you happen to be older or just because you happen to be young or just because you happen to be a women and incapable of being incapable of carry it or you happen to be weak and frail that that opportunity should be denied you.

Panel comment:

Ok thanks.

Panel comment:

Thank you very much; appreciate that Gerard.

Response:

Thank you.

Panel comment:

I think our next speaker is Nick Bos.

Mr. Nick Bos
5668 Poplar
Port Alberni, BC

Thank you gentlemen. I guess ladies and gentlemen I am not sure. I might just introduce myself to the panel. My name is Nick Boss, I have lived in Alberni since 1957. I have worked, pardon me, I am a father of 4 children. Fortunately I still have one left, and 11 year old, he keeps my lively I guess. I have worked in Franklin River Division, in Cameron, in Muchalat Inlet, Effingham Inlet and a few inlets I guess that I forgot. I worked in Sproat Lake Division of MacMillan Bloedel since 1961. I was vice president of our local union between 1980 and 1990. I guess the reason why we take out our time to come and address the panel is because we have

Tape Ends

Nick Boss
5668 Poplar Ave
Port Alberni, BC

I would suggest that in some areas of the Nahmint Valley or drainage that long-line logging, high-lead or long-line machines, would be more beneficial than grapple-yarding. I'm not saying that grapple-yarding doesn't have it's proper place. But if your going to plan the model plan for that drainage than certainly some long-line logging would have to take place. Long-line logging lifts the logs above the ground rather than drags them across so you have less soil erosion, basically it would be benefit. In terms of streamside logging, a question was this morning if your beside a fish creek would you log it? And the answer would have to be very "yes" or "no". If it would destroy the creek, you do not log it. If you can log it properly and use directional falling and it doesn't impact the fish then there is no reason why we can't do it properly. Certain areas, streamsides should not be logged. If the terrain permits it, it can be logged properly and there again it's another recommendation for your committee to look at. Directional falling beside rivers and creeks is done and it should be done more. In terms of recreation I think that one of the fallacies is that today we're thinking that Nahmint is new country it's got to opened up and Hollywood is going to be down there. Well, gentlemen, it's going to be half competition from the Alberni Inlet and although Nahmint is very famous for the fish that hang around in the bay, I don't believe that we can see a great impact of tourism or visitors to the lake. I believe more people will utilize it for steelhead fishing and trout fishing but I don't believe that we will see the amount of folks that travel up and down the Alberni Canal after the biggest fish that is coming this weekend or next weekend. I don't think you will see that in Nahmint. The very positive side of logging the area is that you will look after your greatest resource, your people. It will provide accessibility to the valley itself and it will enhance the wildlife. As you know there is currently there is a herd of elk in the area itself and I would suspect that the more feed there will be in the future after valleys are logged and start to regrow, that there will be an increase in both the deer and elk population of that area. I guess this dealing with a number one resource, I guess the last stats we got, the last information we have from Stats Canada is that in the affluent sectors of the country, you have three death, pardon me, four deaths for thousand people. In the poorer area of the country you have fourteen. So I guess in terms if you know where we come from very simply, that we need employment for our people. We need to feed our families, but we don't have to destroy the environment to do it. I just, there is something about Sproat Division that the Divisional Manager did not mention and I thought perhaps he would. Sproat Lake Division, the Nahmint area the timber value is very high. It is valuable timber. A lot of the Sproat Lake timber that's left has very little value. It is high on cull, low quality wood. So I suspect that for an operation like Sproat Lake Division to run or to break even or profitable basis. Again the Nahmint is that important because basically if you take that Nahmint area out of there, that Division would not be making any money. The overall picture is much more scary. Our AAC goes down in the area. There is a tremendous amount of pressure by M.B. to shut down our Plywood Division and gentlemen I assure that there is reduction in cut. That the first operation, I guess that MB would take the fibre away from would be the plywood plant and we can see an additional 400 people out of work. So the decision of your planning for Nahmint and the overall picture is that important. Thank you gentlemen.

Panel comment:
Thank you very much Nick. Thank you for a good presentation. Bill do you have any comments?

Panel comment:
Yes, good presentation Nick. As chairman of the Camp Committee for Sproat Lake Division your closer to the workers than most. Perhaps you care to comment on what this mood of uncertainty about the Nahmint does for the workers, to the workers and comment on that.

Response:
Well what our people are looking at really, the Divisional Management says that we're going to be working 200 days a year. Well if we are we are extremely luckily because normally it would less than 200 days a year. For loggers at Sproat Lake Division when you shut down in the winter time there is no where else to go. So your annual wage certainly is going to take a big dive if we do lose the Nahmint area itself. The way our people feel right now about the environmentalist basically, is extremely worried. They see the decision that came on the Carmanah Valley and if a similar situation were derived at Sproat Lake Division which resulted in job loss. There is no two ways about it, are people are feeling terribly insecure and they would like to kick somebody, but quite frankly they don't know who to kick. It is a terrible feeling for our guys that if all you have done all your life is logging and you have no where else to go, it's pretty sad. What raises the question even more is a comment from Vicky Husband, what would you like to be retrained at. That's pretty sad because if you have been an honest logger all your life, a taxpayer, you grow a family and some lady that doesn't live in your area all of a sudden wants to make the decision for you. It gets pretty touchy. And again the likes of Gillespie when it comes to credibility, I'll leave that.

Panel comment:
Good, Mike. Do you have any comments?

Panel comment:

Yes, it is a comment. No questions Nick because your points were very clear, very concise and I appreciate that. The one common thread that I think throughout the presentation this morning and culminating in yours, was that loggers are in favour of good, well managed, well planned, and environmentally sound logging. And I just wanted to make that point because that is a common thread throughout the talks this morning.

Response:

If I just may Mr. Chairman. People have to realize that people in logging and in our mills, we spend most of life in the environment, particularly in logging. We're in it everyday and our recreation, a lot of it is in the woods. People forget that.

Panel comment:

Rick do you have any questions?

Panel comment:

Just one point Nick. When you were talking about spacing. We're you thinking of it more as a value-added type work in the forest to increase employment as leading to commercial fitting or as just basic work to increase the quality of the future harvest.

Response:

Basic work to actually improve the stand itself. Your a professional forest and know exactly what I mean. To just plan and to let it go on it's own simply is not good enough. You have to space properly at a certain age and we're seeing some of benefits of spacing now. It doesn't only look good, but you don't grow pulpwood for a tree for a future utilization of plants.

Panel comment:

Other people that, feel about commercial thinning, multiple entry and to increase employment during times of old-growth not being available.

Response:

We think it's a band-aid approach, it would probably do more damage going in there and trying to do commercial thinning, then you're enhancing the stand. Once it has gone that far you wonder what the proper thing to do is if you have a new area or a fairly new area make sure the trees get spaced on time. And again I am probably talking to the converted, somebody has to pay the bill. There is no grants for spacing. Of course the reluctance what MacMillan Bloedel says well we grow just as much fibre without spacing than spacing. And I challenge that and if that is to be true then to me they're growing a pile of crap. The tree farm has to be looked after and the crops have to be looked after, they have to be spaced on time. If you don't, the results are not going to be what they should be. And it is certainly not going to be ready on time for their second crop. We all know that, some people won't admit it.

Panel comment:
I'll touch a little bit on same point that you just raised, Nick. These are essentially Tree Farm Licenses are a combination of private and public lands and some cases private and public timber. But the next timber crop on much of a Tree Farm License and Tree Farm License 44 is no exception, essentially is public, it's the public's trees that are growing up there. But I'd like to know do you have any thoughts about who should pay for that silviculture? Should it be the public, should it be shared, should it be largely the licensee because of the exclusivity of their access to the timber or do you think that is an issue that you want to think about?

Response:
Well, it has been an issue that has been discussed in the political arena and including myself under many circumstances. I guess quite frankly at this point I don't give a darn who pays for it anymore, although I am a taxpayer. And I am sure that Mike will say, well we're paying the bill M.B. should pay it. But it is my belief that the most important issue in forestry is that we have to look after it properly. Somebody has to pay the bill, grant it, but it has to be done. So let's get it done and argue about the money later.

Panel comment:
Ok, thank you very much.

Response:
And I know that doesn't resolve a problem.

Panel comment:
I understand. No, that's perfectly ok. John?

Panel comment:
Well, you sort of asked my question. I get a feeling that I am going to get the same answer. We're certainly living with or suffering the legacy of some poor logging practices and in the past few decades as far as Fisheries goes and I was going to actually ask you the same question. Who do you think maybe should pay for the restoration of those sites? There are programs underway right now, but they're fairly slow moving and one of the biggest problem is funding to try and restore some of those previous drainages. Do you have any thoughts on who might burden that, shoulder that burden?

Response:
Well, I guess the easiest thing for this meeting today was to have some joint funding. But you see what happened when the feds made some funding available, by the time actually hits

the project it gets watered down so bad, actually we get very little production out of it. The welfare program that were instituted really was a waste of money. So what we need is proper funding to get our forests and sites back in shape. There is no two ways about it. Who pays? I guess it is you and me, one way or another. No matter how you look at it we pay the taxes.

Panel comment:
I know that the companies have been receptive in other areas to bite the bullet, even though they might not have been the perpetrators and undertake restoration of previously damaged areas and I think that is a positive sign. Thanks, very good presentation.

Panel comment:
Sandy?

Panel comment:
I would just like to thank you for a very insightful presentation, I don't have any questions. Thank you.

Panel comment:
I don't have any question either. Thanks.

Panel comment:
Thanks a million, Nick. I think we have one last speaker scheduled at this time and Mr. McLeman would you like to make your presentation?

Jack McLeman
Port Alberni, BC
Site 127 c-31 RR#1

I am Jack McLeman and thanks again for letting me make a presentation. I appreciate last week's practice run and this week's practice run, maybe I will get it right one day. First of all my background. As a person, I am married with two grown children, both working in the wood industry. I worked at the Somass Sawmill on and off since 1971. I worked at Harmack prior to that and a lumberyard prior to that. During that time I've seen many changes in the work force, both in Port Alberni and the rest of Vancouver Island. I've seen our mill drop from 1,100 employees to 450, almost overnight. And our local union dropped from 6,000 to 3,500 in about the same period. I've personally experienced long periods of time on UIC and welfare and refuse to have myself put in that position again without putting up a fight. And I guess that is why I am giving up my time today, and last Saturday. I gave three weeks of my summer to work with a company. I am trying to get Somass back on track so we can make a profit and keeping the guys working there that are there. I don't ask for any applause for that, it is just something I feel I have to do to keep myself working, to keep my boys working and their kids working when I get grandchildren, I hope that is not too soon. Other associated concerns at the present our ability to earn a living is under attack and the Clayoquot Sound, the Walbran and other areas. Now you wish to study the Nahmint Valley. Government agencies are progressively putting the island on UIC roles, one valley at a time. They don't seem to have the common sense to understand that you must look at a whole area at a total and assess their job potential on that basis. And each time you put on blinder or blinkers and just look at one area, we lose jobs. Families lose homes and they often lose the desire to survive as a family and as individuals. And when people commit a psychological form of suicide that some of them turn violent. They don't turn on themselves. I ask you to consider this factor before you make anymore knee-jerk decisions that would affect our jobs. Believe me when I say we're getting frustrated and mad enough to do something on our own. The guys I work with at Somass are just that frustrated. Guys I'm talking to, are talking, I say radical, I've never been a violent person and I don't think they have either, but they are that frustrated with the jobs going down. One fellow here asked a questioned, how are the guys at Sproat feeling. Well the guys at Somass are frustrated and we've lost a lot of jobs. We're looking at losing another 150 and my manager's felt my frustration on that subject quite often in last six weeks, but he hasn't kick my off the task force yet. I just ask you to consider that before you make any decisions. Some companies, not necessarily our own, don't seem to care if they're logging or not or if they are logging properly in some cases. They will take a lot out when the markets high and don't take much out, lay everybody off when the markets are down. And they should be told and they should be made to live up to their TFL agreements. There is no question. And sometimes I feel that it is just us workers that are finally waking up to the threat of the economical survival and be prepared to fight for our jobs. And please don't forget that fifty-five percent of our BC economy is derived from the forest industry. You need us to pay your wages. Now, back to the main subject that you guys asked me questions on last week. The Nahmint Valley recreation question? As you noted in my open paragraphs I am not in favour of preservation of much more timber. I've already stated that I believe Vancouver Island is already a park in it's entirety, with the exception of Victoria and Nanaimo, and they are both ugly clearcuts that haven't been replanted by the way. It is my belief that no area of the Nahmint should be set aside and perpetuity. As part of the price for doing business the logging companies should put in recreation areas. These areas don't have to remain constent. After sixty or so years the area can be moved and the first area should be logged. This way we can have logging, a good economy, and recreation. It is my belief that if it wasn't for the logging companies opening up the roads, there would be very few areas opened to recreation or anything else on Vancouver Island. Two alpine areas should be kept accessible for recreation, that's Mount Klitsa and Nahmint Mountain. There should be provision for organized campgrounds for people in campers etc. as well as wilderness camping. This should only be done, however, on a non-permanent basis. In answer to your concerns regarding motor boats on Nahmint Lake, I feel that the lake is large enough to handle motorized traffic, but boat ramps should not be built. I heard a good argument to put them in a while back, but I already wrote it. This would make it difficult for people to put high-powered speed boats on the lake. In conclusion, I once again would like to ask you not to freeze us out of another area. We need our jobs, BC needs our tax dollars and even those who want us unemployed, need us. There are people in our society who would go to any length to stop us working. Even to the point of injuring us. We've noticed this at the Somass Sawmill, where we two, three times we've had intentially spiked trees come through our rigs. I've watched those saws come a part of a saw filer. I'm part of the shop committee in our mill and I heard the guys and I've seen it. Someone is going to get killed on day. And that is part of our frustration as a converting plant. The other part of course is the unemployment. I ask you not to listen to them in the Nahmint or anywhere else because we will not take being unemployed quietly and it would cause social disruption. I am convinced of that. Thank you.

Panel comment:
Thank you Jack. Mike do you have any questions?

Panel comment:
No.

Panel comment:
Sandy?

Panel comment:
No. Thank you for the presentation, Jack.

Panel comment:
Jack you mentioned 150 jobs again, is that the work force at your mill?

Response:
No, the work force at the mill is presently, in July, was 350, but normally it is 450 actual jobs. But the plans that we're looking at because of down sizing because of lack of fibre as I mentioned last week, and I did have quite a long talk with our logging guys, Gary Griffith and Don Dowling, during this week and it is the amount of logs that are available to Somass as a cedarmill, are going down rapidly in the Nahmint. There isn't a lot of cedar in percentage wise, but the quality is very high and it's all good stuff in which will be coming to us. The plans that we're putting together, they're the best plans we've got together so far are still 100 jobs down. If we can't get a lot more value-added products going on the

market and that is something we're working on. That was my calculation quickly while we're doing our talks and like I say, I guess our managers have felt my opinion on that quite often in the last few weeks.

Panel comment:
Is that supply combined with demand or does one out weight the other. I mean we know the demand for the product has gone down.

Response:
That's correct.

Panel comment:
Is that equal right now in your....

Response:
Well right now we have enough fibre to meet the existing demand but when the demand goes back up, we will no longer have enough fibre to meet the normal levels that we have been use to.

Panel comment:
Thank you.

Panel comment:
Jack you mentioned boat access to the lake and left me a little confused there. I don't know if I heard you correctly. Perhaps you could elaborate. You think that we, it should be ok to have motorized boats on the lake. Did you have some thoughts about the access to the lake...

Response:
That's, what I say, could handle motorized boats, but I'd rather not see a boat ramp so you don't get the jet boats. If I happen to be camping there I don't feel like being wakened up at five o'clock in the morning with some guy flying by. I don't mind getting woken up with the birds and stuff like that.

Panel comment:
I see.

Response:
That's my opinion, but Gerard did give a good argument for older people getting there small boats there, so and I wouldn't want to discriminate against there either, so.

Panel comment:
Maybe we could have bulkhead instead of a ramp someplace, where people can bring a vehicle up right to the edge of the water, but not necessarily launch a heavy boat.

Response:
That's possible.

Panel comment:
We'll see. Any comments, Rick, Mike?

Panel comment:
No, comments.

Panel comment:
Joe.

Panel comment:
No, good comment or good presentation Jack.

Panel comment:
Thank you very much and thank you for all the presenters here. That concludes all the scheduled presentation at this point, so we will retire to the next room.

Tape Ends. Tape resumes recording after short break.

Panel comment:
Thank you very much. If I can just briefly describe the purpose of the presentations, which is for our team here to hear your views and to record views completely and essentially there are some basic working rules and that is that each presenter is limited to about fifteen minutes for their oral presentation. We will withhold our questions until you have completed your presentation. And questions we may have are aimed only at our better understanding your presentation, not at judging it and we ask that no one make comments from floor. Essentially this is a process for the presenter and the review team, with others to observe but not participate in. Informal comments can be made in the room next door. Those basic rules having been described, perhaps, is it Guy?

Response:
Guy

Panel comment:
Ok, Guy. Thank you.

Guy Dauncy
2097 Windsor Rd
Victoria, BC
V8S 3C2

Thank you. I am very new to Canada. I've been coming out since 1985. I work as independent consultant and writer in the field of economical development and environmental change. So I am fulltime focussed on the whole issue, just what this beast called sustainable development is. It is quite a complex issue. And there is three categories of feedback that I would like to give to your review panel, really. The first two, probably fit within your terms of discussion. The third definitely falls outside of it, but I would still like to share it because I think it is still a view that you probably have to have. So dealing within the terms of your premises first. I went to the Nahmint recently. I was really stunned by the beauty of the area, the water is so pure. If a lake and a valley existed like that in Europe it would be slapped as a National Park, instantly, it is a treasure. As a newcomer to British Columbia, I feel that maybe people are almost casual about how many treasures there are out here. You take them for granted. I also perceive that it is necessary to have a logging industry. There is wood there, it is necessary to get income from the woods. So, in my researches out here, I have looked into different methods of logging and I've been examining the processes of selective logging. Whereby you basically keep the old-growth characteristics, but you are constantly going in every five years, leaving the genetic seed trees, leaving the soil intact as possible keeping the biodiversity. My evidence of this from the east side of Vancouver Island, not from the interior, you must admit is that your actually getting more timber in terms of cubic meters or higher quality. Like a tighter fibre which you can sell for more when it is logged selectively. The renewal period is actually fifty years, the forest area will put on as much growth the entire volume of growth within a fifty year period. Where we are looking at minimum of eighty years or so for the present methods of logging. So I am very convinced that ecological sound logging is also economically sound, actually probably bring more economic value if pursued in that method. I know that that means that considerable change of capital expenditures the methods, the technologies involved in the logging processes, but that is another issue. So my sense that the way to preserve the Nahmint as a beautiful lake and valley, so that in a thousand years, people can come and British Columbians and say "Wow, that's still a beautiful valley the water is still beautifully clear". And so that the people from Port Alberni and other communities keep on getting an income. Is to "A" to log that area selectively. That leads to an added issue that for selective logging you need to be really going in every five years. Not every eighty years or with a couple checks in between. So it is a very different approach to logging that is required and my view of it is that the people who would best do that are the ones that live close by. And the people who provide the best ecological stewardship in an area, and we seen this world-wide, are the local community. And one of the things that disturbs me about British Columbia as a whole, is that the development is totally skewed into the southwest corner. Everyone is crowded into the lower mainland in the Saanich Peninsula, and then there is no farmland. There is all these fights and squabbles going on, which is ridiculous really, when 98% of British Columbia is exquisitely, pristine and beautiful, but there is no development process. I would actually envisage that it would be possible to see an ecologically planned community, a village community, not a town or anything like that. It is something we haven't seen at all in the Nahmint who's role be two-fold to act as ecological stewards for that area and to pursue the selective logging. In the manner of some European logging operations, to be able to pull out the trees on a constant basis, so you are leaving all the old-growth characteristics. You're getting the higher quality timber because the trees will be able to grow to maturity, not of eighty years but maybe two or three hundred years. Where a value of fibre is far more and the world fibre markets really going to in ten, twenty years when most of the rainforest are gone, there is going to be a revolution in the nature of the world fibre market. And it is possible to create an economy from scratch when you've got resources like that using selective logging, using deliberately engineered operation, getting the value out of the woods. So instead of depending on some chap saying " I feel like setting up a furniture business", you use the mechanisms of community economical development which we pioneered in Europe, coming out of our unemployment office. We had to deal with communities with 30% unemployment, 40% unemployment and you conciously assist people to start their own businesses. I would say that within Port Alberni you've got probably 10% people who would like to start their own businesses in the value-added area, but they need assistance and they need start-off capital and they need training and they need resources and they need all that stuff. That can be supplied. So my ideal for the valley would be to actually have a residential community of people living there. Getting their living from logging it. I don't know how that would interface with the existing Tree Farm License. I am sure that a process will work that out. It is a matter of subcontracting to MacMillan Bloedel maybe or maybe a new kind of TFL is needed. On Cortez Island there is discussion of a community woodlot. You know, which is subcontracted out from MacMillan Bloedel's TFL, so I know that there are things that need looking at. And nor do I have any idea where such community will be placed. I haven't done anything like any research at all to look at that possibility. But the secondary should be coming in, we desperately need a different motive of development for the great population 60,000, 80,000 people a year coming extra to British Columbia every year. Annual increase as people want to move out of Toronto. And all it does is push up the price of houses, squeeze out the lower income people and cause unpleasant kinds of developments, whereas if we seeded deliberately ecologically communities elsewhere on the island, we could have the kind of life that a lot of people want to have, where there is also stewarts of nature and getting income from the resources. In more orthodox terms, with the agreement that you've got at the moment, I am concerned that the existing cutting permits are not even in the terms of your review. They're all to be left as they are. I am very concerned that clearcutting on steep slopes is a long term disaster. It is now illegal in both Switzerland and Austria to do clearcutting on steep slopes and hillsides because of the soil erosion problem. The evidence coming through from Spain in particular, is you do not get fourth generation re-growth. You get second generation re-growth it is a total fall down. So if you are looking, I mean our brief should look a thousand years ahead, not eighty years ahead or whatever. You do not get even a tree farm, when you come to the third or fourth generation because you've lost so much soil diversity in spores and organisms that are in the plants on which the health of the forest depends. My analysis I am looking at the health of the forest as being that which creates the healthy trees which we can log and get value from. Not to see as trees that are stuck in the ground. And biologists are beginning to understand what some of these things are in the soil. It is new for all of us, they haven't got names for half of them yet. They know that there is a wealth of, a handfull of soil has a billion living organisms or something. So I am concerned about the logging on the steep slopes. I am concerned about the existing cutting permits, not being under the terms of the review at all. I am concerned that this very review committee doesn't have other resource users sitting on it and speaking to the process by which you yourselves, isn't personally yourselves, but the process by which you've choosen. Clearly the area lends itself to multiple-use and the multiple-users should be on the committee whether it is the wilderness users, the recreational users particular, should be represented so that they have say in it now. That there should be year round use for the multiple-use access. There should be year round mulitiple-use access to the area and not be closed off major parts of the time while logging in progress. That some new category perhaps it is under special use permits should be required for recreational areas, riparian zones, and wilderness zones to be built into the actual planning process. They should be category, I maybe in error here about the planning process, but I think that there is not enough strength for recreational zones, riparian zones, and wilderness zones in that area. And the buffer-zone between the clearcuts and the lake, I mean the places I saw it was about two or three trees wide. Really inadequate to stop erosion into that water when you get downpours etc. And with the possible on coming of the green house effect, leaving aside any rise in the temperature, what we are seeing is a rising of instability of our weather patterns. Heavier downfalls, periods of drought, periods of instability and those are in stabilities cause increase risk of fire, increase risk of landslip as we saw in the interior just recently. So because of the instability in weather patterns which are already happening because of atmospheric disturbance from increased CO2 emissions, it's very important that we put incredible effort on stabalizing the soil which is the root of the forest. It is out of the soil that the forest grows and if we disturb the soil through wrong logging methods, we aren't going to have a forest at all, even the tree farm. So I am concerned that the buffer-zone, it is not wide enough along the lake side and I feel a bit of a schizoid like I am simultaneously saying that it should be clearcut a bit more tidely, when I feel that the clearcut process is economical not the best way to get jobs and income out of the woods and ecologically it's a long term disaster. There will not be a forest work to be had in three generations time. I see that areas of Europe around the Mediterrean which are now stripped. There are no trees growing, tourist come in and can't believe there is no trees anymore. Part of analysis show that there were trees throughout that area, but by bad management and ignorance we stripped it, the same is happening in Scotland. We have stripped the areas and the tree farms are ugly. We know on side of hillside and there is not the wildlife anymore which attracts the tourists in the first place, so it seems that the wilderness in the negative sense, it's dead, ecological dead. So, I want to know in five hundred years time....

Tape Ends
Tape Resumes

Panel comment:
Thank you very much for your presentation. I am going to allow each person to decide if they would like to ask you some questions. I'll start with you Mike.

Panel comment:
Thank you Guy, it interesting and that of a different perspective than what we have heard so far today. I am interested in your idea of establishing a community in the valley, and thereby providing sort of a community stewardship over what is happening in the valley. My question however, is how do you reconcile the having people living in the valley with establishing the valley as some sort of a wilderness area or parts of it as a wilderness area. How do you reconcile that?

Response:
Ok, "A" - it is experimental, it's new, there are two components the hardware and the software. The hardware are things like, you have to have build in sewage-tanks, and to pipe out the sewage, you can't afford to have sewage into the lake, you have to look after that kind of component. Secondly you build ecological covenants into the property ownership rights, which is another new concept that comes from Nova Scotia. A company out there called Integrated Forest Management. They are buying land, they are putting one-third of it into wilderness, one-third they will log selectively, one-third sell on the lake front people who they want to manage will be stewards for the land. I think 32 ecological covenants on the ownership of the land, "Thou shall not", this, that and the other, very strict. They thought they would never sell to anyone because people like their property rights, but it was quite the opposite. They said "I don't mind that but I want to make sure my neighbour behaves" If they are willing to buy into the ecological covenants which

would very tightly control what we see as the individual, you know, high personal freedom to do what I want with my property and this is a very good working model to how this covenant can work. Things like you can't log any tree more than so much in diameter, you can't build outside of certain agreed zoning areas in the community plan, you can't have trailers parked on your land, you can't use skidoos out there. You can't have motorized vehicles of above a certain size. You can invent whatever covenants you want, so people going into the community know that those are the terms of reference in the first place. Basically that challenge faces all of us if we are going to live in a sustainable network. So somewhere we need a chance to pioneer it and find out how these work. They started in Nova Scotia, but it is a new idea throughout the for over here.

Panel comment:
Your telling me it is a new idea! Everything you say is I won't say it is anathema to most of us in British Columbia, but it certainly is different from everything we have talked about, we are always talking about it's a public resource and the crown owns the crown that the people of BC supposedly own ninety-eight percent of British Columbia. What that means quite honestly, that ninety-eight percent of the people in Canada have access to the Nahmint and it is not owned by any one person or group of people or community.

Response:
So then you can have an ownership vehicle which a community land trust where the land is leased long-term permit lease from the crown which is renewable if people are acting according to ecological covenants and acting as stewards for that land. This is a different philosophies around the world there are plenty of philosophies where people live in the park and they learn to live in balance with nature and by being there, they preserve the park, they add to it's preservation.

Panel comment:
I don't want to take up any, too much more time. I have one more question if I may, Ernie. I am sure everybody else is sort of thinking, but as you mentioned selective logging several times, and I guess everybody is wondering, what do you mean by selective logging? How do you envisage selective logging?

Response:
Ok my model is very straight forward, it is based on Merv Wilkinson's tree farm outside Naniamo where he is pulling, y'know, basically you've assessing your annual increment in growth. Pulling that out of the year on every five years. Using small equipment. Because you are going in regularly your capital investment in roads is amortised. There is a lot of theories over a longer period. I think it's down to one twenty-eighth of his overall costs now. He's used the same roads over and over again. He will leave the strongest see-tree there and work out how far the seed will fall given the

wind direction in September, so you get natural selection of the strongest geneitc stock. It is the opposite to highgrading. He will pull out the trees to open up the kind of right areas. He knows every tree personally. He has been at it for 52 years and so it is 137 acres, but he knows it well enough to see what works. He will do amazingly detailed things. Like say that is the corner of a road and that is a big tree he is going to log in 30 years or 20 years, he will get a protective tree on the corner so when his tractor goes round and bashes into it, the protector tree takes the damage, instead of damaging the timber of the good tree. It is a very different approach in which he is putting a lot of love into that forest because he knows the forest itself is his livelihood. He has got to sustain the value of the forest and that way he gets high quality timber coming out, but he has got the yield coming out. I am discussing the actual mathematics with him and he has a book out called WildWood which spells it out, but there are some inconsistencies in his data, which I have taken up with him, but it is pretty impressive in terms of the use he gets from that place and you walk into it and it looks like an old-growth. He's got Douglas Fir regenerating under a very small canopy opening, but it doesn't need a large opening. He's got a tree that he knows to be 1,800 years old, that is still putting on growth. You can tell it is still putting on growth because the bark is still pushing out. He knows it is that old because he had a branch fall off a few years ago, you know, way up and he knew how old the tree had to be to get that tall and he cut it and aving analysis and it was 1,800 years old. So it is not dead on the stump or anything like that, it is still growing. So that was his experience over fifty years defies a lot of current wisdom about how logging works, and he is getting the timber out of it, and I am a new boy to this claim as well.

Panel comment:
Thanks.

Panel comment:
Rick.

Panel comment:
Yeah. Interesting Guy. You have obviously had a lot of experiences abroad there. A couple of things as well with the selective logging Guy, I would just like to take that a little bit further. When you talk about Merv Wilkinson's area it is a fairly widely spaced area, like it is not a dense canopy per se, he has taken quite a few trees out of there and it's a Douglas Fir stand more or less, is it not?

Response:
It's mixed. It is very mixed.

Panel comment:

Right there is some mixture.

Response:

He's got spruce, he's got ......

Panel comment:

How do you see them trying to selectively log hemlock and cedar stands that are fairly dense the first time through, with quite dense canopies?

Response:

I am probably not the person, you need to talk to someone like Herb Hammond for details, I am probably not the best consultant on this area, but basically you have got to do that thinning initially, but what he seems to be saying is when, if you have a dead canopy, dense stand, you pull out a lot of the thinnings and that will release other trees that are held back. Little spindly trees that are certainly put on growth and catch up with all the other ones when it's released and gets space. I have seen logging practices in Britain where the thinnings aren't done and it's just disasterous you get a whole forest of matchsticks. Thinning is very valuable to maximize the growth of fibre so it is like human interference can get higher quality timber out of an old growth forest and when the forest itself is left to itself and yet still keep the characteristics which is only what we learn from gardening. So there is no reasons why it shouldn't apply to forestry as well.

Panel comment:

I agree with you. The only thing is that when you go over for the first time in an old growth stand it makes it a little more difficult to you don't have the variability in a lot of places as there is an succession going on. There is some succession going on, that's correct, but the canopy is it is fairly stable and top third and it's very difficult to follow out of those trees safely and without damaging a lot of other trees.

Response:

There is a complex issue in there because I have a logger friend in Britain who came out here two years ago and he was astonished that and this is secondary opinion, not mine, that his opinion BC Loggers do not have the skills necessary to do selective logging. Merv Wilkinson can drive a nail in with a tree felled exactly on that nail and you put a lot of care into work where that tree is going to fall. You need that degree of skill for exactly what you say because of you know, creating havoc as a tree could falls in the wrong place. So you need to work it out in detail so that it means much more detailed care so more labour and more time which is the payoff in better quality of timber instead of creating havoc when a tree falls in the wrong place, but you need people who have got the different kind of skill in feeling how you falled trees because clearcutting is a different felling principle.

Panel comment:
I can see where you are coming from with the community-based type of attitude for that.

Response:
The people will be there then for their whole life they would know it in detail. If you are shifted to one place and you are out as quick as you can, because you've got to get the resources harvested somewhere else, it is a very different mentality.

Panel comment:
One other thing that I would like to clarify when you were talking about third and fourth generations of trees. That was on steep slopes you were talking about there not coming back of is that on.....

Response:
I don't know, is the answer, I haven't done enought research in Europe on that. My intuition would tell me that the steep slopes are the risky ones because you can see how erosion happens on the steep slopes. I don't know answer on flat areas. We have hardly got any old-growth to measure anything by in Europe anyways. The whole thing is you know has been logged over so many times. So it is actually tree ... (unintelligible) ... with ever if it doesn't rise anyways we are talking about total cutting.

Panel comment:
Right.

Response:
I am talking initially about slopes, I do not know about flat areas.

Panel comment:
Thanks very much.

Panel comment:
Thanks for you presentation. I don't have too much in the way of questions. You mentioned that Merv Wilkinson makes his livelihood from his tree farm lot. Wilkinson I am sorry.

Response:
He makes a third of his livelihood.

Panel comment:
Yeh, third, that's good, I just need a clarification there and that is just about all. John do you have any questions.

Panel comment:
It is such an interesting presentation I hate to pick and choose from it to ask you a question, but when talked about

steep slopes what percent or gradient do you have in mind?

Response:
I haven't done enough research, I haven't read enough material for other people to note.

Panel comment:
Those kinds of considerations are certainly key here on the coast. You probably can't measure are see our name tags from where you are sitting, but I am in Fisheries so slope erosion is a prime concern to me. What draws a lot of our decision making here is the steepness of slopes. Selective logging means maintaining roads systems over long periods of time and road erosion as you are probably aware is a prime concern for maintaining roads in the long term, particularly on steep slopes, and I know in the Nahmint Watershed, have you had an opportunity to go in there and have a look at it?

Response:
I have been there once.

Panel comment:
There is a great deal of so-called steep-slope logging in there. If you weren't to eliminate it, you would be basically just valley bottom logging and those kind of thoughts come to my mind when you are talking about selective logging. Selective logging also to my knowledge means renewed soil disturbance. I appreciate what you are saying about the fact that you can take certain care on that, but if you are talking about any gradient at all, you are into a sort of a skidder-type operation. Is that the main kind of cable yarding or system you are talking about?

Response:
I know that selective logging covers a multitude of sins. And the selective logging that I was talking of was people like Jerry Franklin from Oregon, the new forestry and he will say take out a smaller area and then we will break it down gradually, I am not talking about that. I am talking about sustainable selective logging. In which you are really picking out the trees, individual trees, so you are not getting that unintelligible at all in that sense.

Panel comment:
What kind of yarding systems are you using? Is it a skidder or cable yarding?

Response:
Your best actually, this is where my lack of expertise comes in.

Panel comment:
I would suspect it is probably skidder logging that you are talking about planting individual trees and as you can appreciate on any kind of slope at all that means a renewed soil disturbance each time you do it. And I am not

challenging you on your thoughts, I think that they are excellent. I am only trying to raise the concerns that as a person that is talking about stream sedimentation would have with the idea of reopening skidder-roads every five years to re-yard and I mean probably in five years it would just be starting to heal up again.

Response:
You see I have a parrallel my concern with that which is my perception out here is that the whole issue, Forestry versus Environment, has been so polarized that you either want to save it completely or you want to let the logging happen. There hasn't be the critical review analysis of what selective logging means, to look at this kind of issue.

Panel comment:
I agree.

Reponse:
The capital investment the equipment changes the machinery, there hasn't been any work done on that so we are talking guess work on all of this. There is very few, I mean Merv Wilkinson is the only one I know who has fifty years back to him, there are people who have done it for 20, 30 years, and Merv Wilkinson has yes some steep slopes ther's no soil erosion going on in there at all that I can see. He's got a whole range of it's not West Coast steep slopes, but that certainly needs doing.

Panel comment:
Well, I certainly appreciate your thoughts that is all the questions I have.

Panel comment:
Yeh, I echo the sentiments that is a really interesting presentation, Guy. Speaking of the selective logging and selective harvesting systems that is a facinating area to get into and in fact it is an area that we are looking at very activily throughout the entire province, just to see exactly what sort of areas it will be applicable to. As I say, research is going on to see where it is going to be applicable. Some of John's comments are indeed the comments that we have been most concerned about and that is that sometimes when you are trying to buy a selection harvesting system you are going to create the types of problems that you are hoping to get away from, vis a vise the clearcutting sort of aspect, whereby your actually having to put in a larger road system which indeed is going to be your greater source of sediment for the various draining systems around. But there certainly are areas that you can apply selection systems very well to and there is a lot of research going on in that area right now just to discover exactly where we can do it and

where we can do it well.

Response:
Well ... (unintelligible) ... Merv Wilkinson's road system he's had one main road, his width is a lot narrower and he is not using big equipment and the small trails that he has coming in, he will use horses if necessary to bring things to the main road.

Panel comment:
Yes, I have been to his site, it is very interesting.

Resource:
It is a pity that we have just one site like that, you need about ten or fifteen to compare.

Panel comment:
I would just while you to mention it I can't keep my mouth shout. We have horse logging, shelter-wood logging, selection logging, and commercial thinning going on operationally in the Port Alberni Forest District and Merv Wilkinson is certainly an example of a model private woodlot owner. He's certainly not the only woodlot owner on the east coast of the island who has a lot to be proud of. Mike do you have any comments?

Panel comment:
Yeh, just on this selective logging and it is an interesting concept, but do you understand that the first growth timber could be like for instance, in British Columbia I believe there is, every year there is close to 25 loggers killed even with clearcutting and most of the danger comes out from falling timber into other timber. If you hit a large fir or something that hits branches they are going to, should back out of there. How do you propose to enhance the safety?

Response:
Well again I get my expertise the same when you are consulting you do a lot of listening.

Panel comment:
That's right.

Response:
Merv Wilkinson says he has felled 1/2 million acres by clearcut in his life and when he is not doing his own thing, the other time he is out there contracting on his work. The only two times he has been in danger of his life was on cliff operations. Never on sustainable selective operations. So his belief is that danger is with the clearcut method, but I can only echo someone else's life experience. What we need is a proper research process to find out what are the facts.

Panel comment:
Are you familiar with the Workers Compensation Board of British Columbia's approach to selection harvesting. They are, my understanding is, that they are very, very concerned

about it because in their view, their research and their practical experience and dealing with the aftermath of logging related injuries is that it is definitely more hazardous than clearcutting and unfortunately and it is one of the blocks that we have in BC is that in order to apply selection systems, they must be at least as safe as the alternatives. Now there are other problems as well.

Response:
I grant you that and I would argue, I would probably, there not been an analysis done on the nature of injuries. The training involved, I would like to see that maybe what you would recommended is that a proper review is done on a search into the injuries, the situations, maybe when all injuries first came out, when the industrial revolution first arrived there were injuries all over the place, so you have to help the safety board unintelligible. It is possible that we are so new to this idea of selective logging that we haven't got the greatest sophistication that you don't do that, you don't that, you do wear this you know, but our ground rules and the people lack the experience, same as inexperienced motorcyclist who have already accidents that more experienced drivers. I would say that detailed research needs doing before I would simply say well therefore it's more dangerous.

Panel comment:
I accept that.

Panel comment:
Ok anymore questions?

Panel comment:
Thank you very much for your presentation. I really do appreciate it and thank you for your patience in waiting. Would Bernice Packford would you like to make a presentation to us? Thanks Guy.

Bernice Packford
Ms. Bernice Packford
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Victoria, BC
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I would like to start with a question if I may. Is this the review committee.

Panel comment:
Well it's the lion's share of the review committee. There are perhaps one or two people perhaps not here at the moment.

Response:
My name is Bernice Packford. I live in Victoria and my presentation will be more personal and less technical and less

learned. I want to address the question of process. The methods by which are sampling and trying to find out how people of British Columbia feel about forest and I thank you for having this open house. I want to say a few words first about the nature and composition of the committee. I see it is all men, which I think is a very grave error to begin with. There should be an equal amount women. That is point number one. The second one is that I understand that you're all professional foresters either employed by the government or by all of us. I know somebody is shaking their head because I am at a disadvantage. I don't know you personally and I don't know what you professonial qualifications are, but I do know that this committee does not have ordinary people on it. Fishers or people who like to walk in the woods. I don't like the word consumer, we don't consume the forest. Our rather ordinary citizens. So I think that is a omission that should be corrected before the committee finishes its work. One, there should be women added. Not one token woman, but women and there should be people drawn from other sectors of our population. The third point that I'd like to make is that I was not aware there was going be this, as I was talking to Mr. Brand, I thought this was just going to be an open house and I didn't read the fine print about that you can make a presentation. What I would like to suggest that there be, as well as the open houses should be followed by meetings. Now it could be a straight meeting with people making presentations, but rather than that and then have third type of meeting, I would like to recommend that that meeting should be presentations and discussion, so that people in the audience can comment on what I am saying or what Guy Dauncey said and that there be some discussion at these hearings at these meetings. And if a consensus does not seem to appear and there's great feelings on preservation of old growth and/or logging, and I am not talking about what kind of logging at the moment, then maybe we need a public inquiry or even a royal commission. While I was talking there another thought you had and I wanted to make that point. In discussing with Mr. Brand I understand that there will be one block that is being cut right now and that MacMillan Bloedel have the authority and have presented and had approved two more blocks while the review committee is meeting.

Panel comment:
No, I don't think that's correct.

Response:
Am I incorrect in that information?

Panel comment:
I don't think it is Ma'am. The cutting permit was approved prior I think.

Response:
Oh, yes!

Panel comment:
But not during this process, they were....

Response:
Well has all logging been put on hold in the Nahmint Valley.

Panel comment:
No, that's correct. It has not been put on hold. There are some blocks approved for harvesting that have not been actually harvested yet. That's right. But that occurred just prior to, the approval of the cutting permit that exist in the valley right now, I could be wrong I'd have to check the date, but I don't think it occurred while this committee was in progress. Prior to it. Am I wrong?

Response:
Well it doesn't matter whether it was approved prior. Is logging, clearcut logging, going on now in the valley?

Panel comment:
At the moment to date there is no actual harvesting going on, but there could be as soon as the weather conditions permit.

Response:
I see. So the only thing that is holding it up now is the weather not the fact that the committee is sitting?

Panel comment:
No harvesting has been current approved, cutting permit is being honoured. In other words, it can go forward, yes.

Response:
Yes, it can go forward. Well, I recommend that there be a moratorium on any kind of logging until the committee has may it's recommendations because it makes a mockery of the committee. So I have made my points.

Panel comment:
Thank you very much I appreciate that. It was a good presentation given that you more or less made it off the top of your head. You have raised some very important issues that are obviously very sensitive ones in many peoples minds. I think I will start at the other end of the table this time and ask Mr. Kokura if he has any further questions?

Panel comment:
Just for your information Ma'am, I am not professional of any sort. I am an elected person, I am director on the Regional District of Alberni Clayoquot and I have made my living from the forest most of my life, but not in any managerial position or anything to do with the government. I really don't have any questions except that if you read the terms of reference this review committee was not meant to be put into place to

put anything on hold and the existing logging permits are being honoured, but my understanding of the whole review process is that if there are some sensitive areas they could be looked into and as far as I understand that the cuts that are already approved are depending, you know, it is in the eye of the beholder, but they are not in an area as sensitive as some people may imagine. That is the only comment I have.

Panel comment:
Sandy, have you got some questions.

Panel comment:
Actually I don't have any questions I appreciated that you presentation Mrs. Packford. I don't have any questions.

Panel comment:
Well I don't have any direct question either Bernice, but your concern about not having ladies on the committee is curious at lunch time Sandy and myself were discussing that and that is a difficult on to address and perhaps resolve. I think that ladies are underrepresented on most of these committees if not all of them, and I think that we could strive for the day when we can at least get some representation of build on that. I really appreciate that point. Thank you.

Panel comment:
I agree and second Mr. Lambs comments. Again I don't think I have a question, but perhaps I will try and make a point or two of clarification. You asked for or you touched on the possibility of a royal commission if the matter cannot be resolved and one of the problems, we will note this in our report that and it will be part of a public record that you made this presentation and that you mentioned this, reference to a royal commission, but this review team's mandate is limited to the integrated resource use future of the Nahmint Valley and so calls for Royal Commissions cannot be addressed directly by this team, it is essentially that type of decision is a political decision, it must be addressed directly by the elected government of the province. So, I don't want you to feel frustrated if you find in our report that we don't recommend the royal commission because we are not really authorized to even discuss that. That would be something that the citizens would have to bring up with their government in another forum. We can refer your comments through our own ministries, but we are not really in a position to deal with that issue. There are some limits I want to clarify a little bit about the fact there is still are approved cutting permits in the valley even though that there is a planning effort or review of the existing plan going on. Those cutting permits while they are valid and as soon as the weather permits MacMillan Bloedel would be therefore legally entitled to take up operations on at least a few of those cut-blocks. They have voluntarily agreed to wait as long as possible before doing so this fall in order that our draft recommendations, should they touch on the configuration of any of those cutblocks, will be taken into account. In other words the

company is doing it's best, within the terms of it's present approval to harvest, to meet the spirit of this effort, that is my understanding of their involvement and so I don't think it is fair to characterize the process in one which the company is going ahead in some roughshod manner regardless of what this process happens to bring forward. The companies very sensitive in my view to what, the public situation and I think they want to show and be seen to show due regard for our recommendations if they can. And so I don't have any further comments. I'll just ask Rick if he has any questions or comments?

Panel comment:

Nothing specific. I just like to thank you for taking the time to put your concerns on record and not just talking to me, I think that is quite important.

Panel comment:

Thank you Ernie. Thank you for your comments Mrs. Packford. You notice me shaking my head, most emphatically. I am not a professional forester, by training I am a professional biologist actually and along with John Lamb who represents the Federal Department of Fisheries. I am representing the Ministry of Environment, provincially at least on today's account. So there are a number of agencies and individuals on the panel that are not foresters. We infact represent those agencies that were involved in the first plan that was built for the Nahmint which was 1975. Thank you.

Response:

I just speak from the top of my head and may I say another few points if you don't mind.

Panel comment:

Yes, I think that would be alright.

Response:

I do want to say that I concur in the previous speakers points that he made. I'm active in an organization known as Capital Family Association, very concerned about the de-industrialization that is going on in British Columbia, specifically in Victoria, with automation, computers and so on and there is just not enough meaningful work for all the people we have. So the concept of selective logging, community stewardship, couldn't be more timely than coming to the fore now. To provide a living wage for parents to raise their families. I've been to Mr. Wilkinson's Farm because I own some property in Sooke which he has very kindly came down to look at. It is not prime forestry, but it can and does grow some trees and I am very impressed with what he has done and I encouraged everyone in the field to go and see it. Nothing to be afraid of.

Panel comment:
I think most of us have been there.

Response:
I am delighted that you have and that's the way that we need to go, if we expect to have any life on the globe, on this planet five hundred years from now. Thank you very much.

Panel comment:
Thank you very much. I think our next presentation is at about 5:10 p.m. If you'd like to make a presentating. Could I ask you to maybe make an appointment and could you make your presentation a little after 5:00? Could you wait that long? Or would you like to try and schedule it for then?

Response:
I would rather do it before that. I'd really don't have anything prepared and I don't know a lot about Nahmint Valley.

Panel comment:
Fine.

Response:
Just a few words I'd like to suggestion.

Panel comment:
Could you give us your name?

Response:
My name is Heather Graham.

Panel comment:
Heather Graham.

Heather Graham
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As I said I'm not familiar with Nahmint. I believe it is in MacMillan Bloedel's TFL 44 holding. Is that correct?

Panel comment:
Yes.

Response:
And I was wondering about the possiblity, seeing as you are reviewing the integrated watershed use of the area. I understand that in Tofino Creek, now that is also in TFL 44 up around Clayoquot Sound, which you mentioned you were familiar with, the Clayoquot Sound area?

Panel comment:
I am the director on the Regional District of Alberni Clayoquot the name just reflects that.

Response:

Well what's being tried there is something that has been used extensively in the Interior and it involves taking lead agency status away from the license holder, which is M & B, and sharing that lead agency status with the Ministry of Environment and Ministry of Forests. They share the lead agency status in this integrated watershed management plan, which is a community watershed structure, that as I say has been used extensively in the interior. This is the first pilot project being used on the coast and I am just wondering if something like this to balance all watershed uses and the importance of the watershed from all these different perspectives if some such plan might be used for the Nahmint? And as I say I know that it has been approved as a pilot project in the Tofino Creek and I also like the idea of having the lead agency status shared between Ministry of Environment and Ministry of Forests. I think in that way you'd have much more credibility for an integrated watershed plan. I suppose I don't have anything more to add to that because I'm not really familiar enough with the area to make comments.

Panel comment:

Those were very important points and those were the kinds of comments that we are hoping to hear today from people. This process, we are essentially taking stock from the existing plan that was prepared in 1975 and out of this will come a series of recommendations that will lead towards probably a much more participative planning future for the Nahmint, that is my assumption. And we're familiar with Tofino Creek, each in our way, because it also lies within the Alberni Forests District and most of our ministries in one way or another have been involved and we do hope that out of the Clayoquot Sound Sustainable Development Taskforce and iniatives within it, such as the Tofino Creek Integrated Watershed Plan, that will come new models for participiptive planning, but we have yet to test those models in practice, in places like Tofino Creek and to probably move forward as quickly as possible with those elements up in the works and some of the elements just described such as joint leadership or shared empowerment.

Response:

We need more involvement of the community.

Panel comment:

Well thank you very much; appreciate that.

Response:

Thank you.

Panel comment:

I am sorry I didn't give anybody else a chance to ask to ask you questions. Is there anyone else who'd like to ask questions?

BREAK

Panel comment:
So you can start anytime it suits you Norm.

Norm Jackson
934 Selkirk
Victoria, BC

My name is Norm Jackson. I live at 934 Selkirk. I guess what I am concerned about is, up in the Nahmint, is not the fact that logging is taking place. I've got nothing against logging, I want to make that perfectly clear. I make my living selling equipment to sawmills and pulpmills and I cover Vancouver Island and Powell River. MacMillan Bloedel happens to be one of my largest accounts. I am stating that for the record because I am not trying to hide anything. But what concerns me is not so much what is happening in the forest today as what's happening or will happen to the forest in the future when my sons, who the youngest is four, he is going to need a job and his sons will also need a job. And I don't want them carrying baggage and organizing whale-watching tours. There has to be jobs available to them in primary resources. Logging being the main one or Forestry. With that in mind, I an not going to touch on reforestation because that has been talked about a lot and I think that everybody is aware of the nonsufficiently reforested areas that we have in the province that has to be looked at. That has to be the single most overwhelming concern of Forestry companies today and the government, to clean up those nonsufficient reforested areas. What I would like to address my comments today is specifically to the Nahmint area and it's just two or three points. The first point shoreline protection. With rainfall of 130 inches to 200 inches per year, with short term intensities of 25 year maximums from 8.5 inches in 24 hours to 18.5 inches of rain in 24 hours. It doesn't afford any, the banks have no protection what so ever if the logging encroaches upon them and these figures are taking right of this little handy pamphlet here. It's known to everybody, but the fact that it's known is one thing. There has to be the will and the desire to carry those practices out. Habitation protection is important. I can remember when I was child fishing with a fellow in the Oak Bay Marina and he use to go get his hearing at Nahmint. He doesn't do that anymore. I mean there is all sorts of reasons why, but we have to protect the last few sound ecological areas that we have. I am not against logging but we have to do it in such a way that the environment is protected. We don't have to log below the road. We can leave that. The percentage of viable fibre below the road is, has to be minuscule in the overall scope of things. It doesn't have to be removed. For the amount of damage that can occur, it is not worth it, leave it there. Fish habitation protection degradation of the environment on a small streams fall into the same thing. The protection the strip boundaries that are left along the streams have to be there and they are not being left. The logging is enroaching upon the small streams and anybody who has gone into bush in the Fall, October - November, you can come across a small stream not four-feet wide and there is salmon spawning in it. They don't all spawn in the Adam's River. They spawn in the little creeks and riffles. They have to be protected. And why not start protecting that in the Nahmint? There was a heck of a good study and development program or plan developed, but I see that it was "brutally", if I can use that word, revised. It was revised to the point where in paragraph of this thing here, section 6.1 Management Goals Recreation, it goes on to say subsection D or paragraph D, study etc., recognized, identified and considered recreation in the planning process. It says considered, that is a pretty loose word. It doesn't say will, it doesn't say shall, it says considered. That doesn't mean anything to me. So what I would like to see in Nahmint is more of a revision to the original plan. Where not so much recreation is taken in consideration, I am more concerned about habitation for the deer and elk and the white-footed mouse and everything else that is in there. We don't have to destroy it. What I would like to see is cessation of logging below the roads in all watersheds not just this one. More care given to the environment for stream degredation. I think that's really impacting on our fisheries and I just have nothing against MacMillan Bloedel, I think that by and large I don't have a problem with then at all, you know they've got a big uphill climb because they've ignored public concern for so long that now they've got quit bamboozling people and start showing people that they are concerned. And that is about all I have to say.

Panel comment:
Thanks a million I appreciate that Norm. Now we will each have an opportunity to ask you some questions to clarify of some of the things that you might of said. I think I will start will Bill Gilmore from M.B. if you don't mind Bill. Do you have any questions to ask?

Panel comment:
It is more of a comment Ernie. Norm your concern on reforestation and that's basically my job within TFL 44 and I can't speak for the province and I know that there is areas within the province that are in trouble, but within the Tree Farm License the areas are replanted and reforested and that's part of the contract and I think that is what's good about a Tree Farm License contract is that the fellow that logs it, is the fellow that is responsible to plant. And that's being done and I'd be happy to take an opportunity if you are up in the Alberni's to show you some of the work that has been done.

Response:
I get up there at least once week and I don't really have a problem with TFL 44 reforestation, but I just made that as a

general comment.

Panel comment:
OK. I know that there is other areas in the province, but the TFL's are generally in reasonable shape.

Response:
I don't have argument with Mac & Bloe's reforestation program.

Panel comment:
Mike.

Panel comment:
Thanks Ernie. Hi again Norm. Since you and I have last talked, and I don't mean earlier this afternoon but twenty odd years ago, I became a fisheries biologist.

Response:
Mike and I have known each other from Junior High days as we found out this afternoon, we just bumped into each other again.

Panel comment:
So I appreciate the comments that you are making and god knows that you're right. That's the key, habitat protection obviously for fish. That's where we all live, that's where we come from, that is where you and I come from anyhow. You mentioned, one of your points is basically shoreline protection, you talked about first and your referring basically to the lake I believe and you said no more logging below the road. Then you went on to small streams and degredation of habitat and vis a vis logging over and through and whatever small streams. Are you aware of such occurrences in the Nahmint Valley and I don't want to pin you down to much, but I guess I will rephrase that question for you. Since you basically just referred to the lake I would like you to remember if you will the river itself. It was your opinion of the logging

Tape ended
Tape resumes

Response:
I haven't been to Nahmint recently I'm planning to attend the tour up there on the eighth.

Panel comment:
Oh, good.

Response:
I guess what really concerned me there, you know, when the picture appeared in the paper about that landslide. There again MacMillan Bloedel's public credibility I think just went out the window, it gapped, because their response to the picture in the paper was poorly worded I think and what they should have done was admitted fault and said that we will do

this and we will do that and we will do this instead of trying to avoid the issue. And I haven't seen any specific thing there, Mike. What I am remembering is twenty some years ago, you know, on tours up there and not again MacMillan Bloedel. It was in some of your competitors areas. Rayonier in particular I think was one of the bad ones, but again that is going back a few years.

Panel comment:
Good thanks.

Panel comment:
I have no particular questions thanks for your presentation.

Panel comment:
Could I just get clarification Norm. I think you said more of a revision to the orginal plan. You're sensing that we should go back to first principles.

Response:
Well, it strikes me as going through this plan here, I didn't have much of a chance to read it through. I got better way through it, but it is going along really great and then all of a sudden there is a line across the page here and down there is a footnote on the bottom and it says "Revised - November '89" and it strikes me in continuing to read it that there was a change in tone and on the one hand up and till this page here, it was let's look after the Nahmint Valley. And I am not going to use the term ecology or environment or anything. Ok, let's look after it, let's be stewards, if I can say that, but then when you get down into here, it starts talking like, I don't want to insult MacMillan Bloedel, but it sounds like, you know, poor wording. And that is what I am referring to. So in going through this section here where it is revised, you know it gives lip-service to everything, but it looks like to me like the primary objective is to log it. Unfortunately, you know that you the way I read it.

Panel comment:
Just a small clarification there. That it mentions revised 1989. The principle revisions occurred in 1980 and the revisions that occurred in 1989 were essentially housekeeping revisions. So the revisions of the standards and objectives that relate to that, revised section, eminate from 1980. Just mentioned that as a point of clarification and we are very happy to get your comments on that. That is the kind of thing we have been asking for in this process is to get members of the public to give us there opinion about the present plan in comparison to what they saw as the 1975 plan. Because 1975 plan was an excellent one in many respects. Ok, thank you. I think I had one more question again related to small creeks and I can't quite recall what my concern was. I think it was something along the lines what Mike asked you. If you had

noticed a problem in Nahmint?

Response:
No, nothing specific. What I was concerned about, I think more than anything was size of culverts and bridges and things like that. That's I guess to get specific that's what I am concerned about.

Panel comment:
Deal with the storm events that are likely out there.

Response:
Well, I think that's what causes a lot of problems.

Panel comment:
One last point of clarification for you. If you haven't already, would you please before you leave here today, take away a copy of 1990 Not Satisfactory Restocked, what is called Backlog Reforestation publication.

Response:
I have a copy of that.

Panel comment:
Oh, you have, good because I think that when you read that you will discover that most of our problem in British Columbia it happens to be in the northern Caribou and central interior regions. So the Omineca, Peace and Prince George vicinity and that actually our coastal forests and in particularly the ones on the south coast have a very small amount of unsatisfactory restocked areas. Which is a good sign. We could go into the reasons why the backlog exists up north and it's not really, it is a combination of very large remote areas that have been disturbed by fire and also some large insect outbreaks that have occurred up there that are contributed to and the federal government and the provincial government have been working for the last five years through a program known as F.R.D.A. Forest Resource Development Agreement, to fund some of the reforestation of those backlogged areas and we hope that a continued program will carry forward and it seems to be going to do so. So I just brought that to your attention, I am glad that you got that pamphlet and John do you have questions?

Panel comment:
A brief comment Norm. Thank you for your presentation. As another Fisheries representative along with Mike on the committee, I am very pleased to hear people's awareness about the fisheries' concerns. I can tell you though that all streams before they are proposed for logging development, have to be classified. And whether or not they carry salmon is a major consideration as to what kind of streams the treatments that occur along streams. Sometimes though the prescriptions do actually end up having clearcutting right to the edges of streams and I am pleased that you are going to come into the drainage during the field trip because I will certainly be manning on of those stations and I would like to

hear your comments on site as to areas that you feel are concerns that may warrant some concern because I can perhaps address them better there. And also I may not be able to address them and I would like to know what your feelings are.

Response:
Sure.

Panel comment:
Sandy.

Panel comment:
I don't have any particular comments or questions, Norm, except to say that I enjoyed your presentation. It was well thought out.

Response:
Thanks.

Panel comment:
Likewise, I think you had a good presentation and I have been taking notes of your comments.

Panel comment:
Well, thank you Norm. I look forward to meeting you again on Saturday the 8th.

Panel comment:
I just have one question. As we're sitting here, the grey mattertrickles, you talked about a provincial, federal agreement for reforestation.

Response:
I've been away from Vancouver Island for 18 years. The last dozen of which I lived in Edmonton and I have just returned in March, the 1st of March. While I was in Edmonton recalling that money was given to each province for reforestation and I thought I remember reading that the province of British Columbia took that money and put it into general revenue rather than put it into reforestation. Am I wrong?

Panel comment:
You'll have to take that up with our Minister of Finance to be sure, but I don't think that is quite the case. We certainly didn't notice it, the Forest Service, the forest industry, and forest consultants. We're very busy for the past five years on F.R.D.A. programs of various sorts. Forest research programs, stand-tending programs, you know, thinning out the forest. We heard speakers earlier today talk about how it is important to thin out the forest. A great deal of stand tending and brushing and weeding of our forest went on under the F.R.D.A. program as well as backlog reforestation of some of those areas I described to you. So I think that

every dollar that was ear-marked for forest renewal got spent, but exactly what mechanism was used to fund the money. I know that when we had a F.R.D.A. Program it had to be approved by federal government people as well as the provincial government. We had to be able to show the public that the money was from the F.R.D.A. Program, as you will see in the Nahmint when visit it. You'll discover signs there that say "This Project was done Under the F.R.D.A. Program". So I think that was, essentially the money was spent appropriately.

Response:
Could of just been my memory playing tricks.

Panel comment:
One of the things that is important is that the federal government, now, is telling the province, all provinces, that further funds to do things like catch-up on the backlog of reforestation will be forthcoming only if we are making sure we aren't adding to new areas. In other words, we don't want you to create anymore areas of not satisfactory reforested land and of course we are trying very hard not to do that. But one thing that the provincial government very keen to do, what we have been instructed to do and is to make sure that every hectare of land that requires reforestation in our District is reforested and promptly, and we take that very much into account.

Response:
You know I think that is the key to forestry in BC. Is reforestation. Successful reforestation.

Panel comment:
Possibly, I agree with you, but I think we have to do more than just reforest. We have to then tend those forests.

Response:
As well.

Panel comment:
Very important. Thank you.

Response:
Thank you guys. I appreciate the opportunity.

Panel comment:
We will retire to the next room here.

Tape Ends

Rory Brown
#44 444 Bruce Ave
Nanaimo, BC

My name is Rory Brown. I live at #44 444 Bruce Ave in Nanaimo. I come before you really under the auspices of three hats. I am representing the BC Four Wheel Drive Association. I am also representing the Nanaimo Side Winders Four-Wheel Drive Club. We have a membership of approximately of 15 people and if you count families and girlfriends etc. we have about 55 people who generally enjoy the sport of Four-wheeling and we get into the Alberni Valley one to two times a year generally. I am also representing myself as a concerned citizen. I am also unemployed electrician and some of the decisions that are made today could effect my direct employment. As an introduction I think a short history of the Four-Wheel Ddrive Association of British Columbia is in order. The Four-Wheel Drive Association of BC was formed in the early 1970's by a group of Four-Wheel Drive enthusiast who were primarily interested in racing. From these humble beginnings the Four-Wheel Drive Association has grown into an organization that represents the interests of four-wheelers in all facets of our sport. We educate four-wheelers in the proper use of their vehicle and promote a respect for the environment. The Four-Wheel Drive Association of BC supports the multiple use concept management of our provincial resources. In British Columbia many jobs depend on the development and the use of our natural resources. The economic growth and our standard our living in this province is directly related to the growth of our forest and our mining industries. We use and enjoy our recreational vehicles in the pursuit of many outdoor activities such as hiking, crosscountry skiing, snow mobiling, photography, hunting and fishing. Our vehicles takes us and our families into wilderness for the shear pleasure of being there. We believe that our forest and mineral resources should be managed using the best possible scientific techniques in order to provide a balance between environmental impact and economic reality. Areas opened up by our resources industries can provide recreation for all. Production roads can be used by a variety of recreational vehicles to access remote wilderness areas. Disused trails of recreational importance can be left in a primitive state with basis drainage and bridge maintenance. This will allow continue use by off roaders as well as providing essential fire access. Hunting, fishing and general sightseeing are activities enjoyed by the young and old, athletic and the disabled, the individual and the family. Invariably, some types of four-wheel vehicle is used to access the favoured hunting or fishing retreat. Without the use of these roads and trails these popular activities would severe be dertailed. If over crowding for fishing game and outdoor areas occurs we could regulated access or reduce the take of fish and game in the best interest of conservation. There are certain areas of our province that because of the unique environmental considerations should remain free of the pressures of development. In such cases the Four-Wheel Drive Association of BC will support the designation of these areas as wilderness reserves. The Nahmint watershed is not an area that needs to be considered for reserve. To be sure there are unique features that pertain to the valley, but they have been addressed very well in the revised integrated resource study. As a avid four-wheeler I have travelled the island quite extensively and have seen both the very best and the very worst in logging practices. The trend is now toward a more environmentally sound use of our forests and the Four-Wheel Drive Association of BC welcomes this change. The image of the logger and the use of the forest has been hurt by the medias and others continual use of pictures of what could be called the baled-mountain syndrome. The Nahmint Valley could be used as a model to should how logging can be done through the decade and to the next century. It is hoped that landscape logging methods will be used extensively in the watershed and that the cuts will take place up and down the valley in different areas and at different times of years that it take to properly manage its watershed. The Four-Wheel Drive Association of BC has three recommendations that we would like you to consider. 1) That buffer zones be established along main lines. The logging takes place behind these zones and once the second growth gets firmly established these zones could then be logged. 2) When a road from one area comes close to the roads or roads from another area, such as valley to valley for example, these roads should be joined to allow 4-wheelers and other users easy access into the back country. It might also prevent other persons from pushing their own road through. 3) When it comes time to develop the campsites in the valley, it is hoped that an equal amount of non-vehicle sites and sites that will except RV's, truck, campers, and trailers will be built at the same time. It is the position of the Four-Wheel Drive Association of BC that the plan be implemented after due consideration of the above recommendations and that is the position of both our club and the Four-Wheel Drive Association. These are my personal views. When one thinks of jobs in the forest industry one usually thinks of the logger, the sawmill or pulpmill workers, and others that work close to the industry. It is sometimes easy to forget about all the other jobs that are directly or indirectly affected by the prosperity or lack of it in the forest industry. My job as a construction electrician and in that position over the past two years, I've worked on projects in pulp mills. These projects lasted approxiamtely 14 months. The rest of the time was spend working on project resulted from the expansion at various mills. At my hiring ..... which covers all over Vancouver Island, 200 man years of work have been done over each of the past two years working directly on projects involving the forest industry and a further 200 years of work per year was done on projects that were an indirect result of the forest industry. As you know the 90's have dawned with an unprecedented growth in the awareness of the environment. This is very good but at the same token our resource based economy cannot be turned off like a light switch and everybody become tourist traps. When decisions are made that affect the job gain or loss in the forest industry it is like throwing a stone into a pond. Sooner or later everybody feels the results.

Panel comment:
Thank you very much Rory for both those presentations. I am going to ask members of the team now if they have any questions and I will start on the far right, if you don't mind John. Do you have any questions?

Panel comment:
I knew that was a danger sitting over here. Rory the fish forestry guidelines weren't in place in 1975 or even 1980 when the Nahmint plan was first put together and since revised, but it will referenced in the new 1990 revision. In the fish forestry guidelines I am wondering if you are aware of the road provisions where we talk about limited access and abandoned roads.

Response:
Yes, I've read both of those. The abandoning of roads is generally where the when the time when the four-wheelers generally get into an area that becomes of interest to us. Well the Nahmint Valley right now holds it is very little interest as a four-wheeling area. It is a more of a camping and fishing type destination that someone would come and spend a weekend. It is generally towards the end of, or the beginning of the second growth when roads have been abondoned and the falling is prepared that the challenge of four-wheeling starts out. We don't go through those areas and try to damage them in any way. It is just the challenge for the four-wheeler becomes into affect when the roads are abandoned.

Panel comment:
Ok, that is interesting to know that your interest are not, I supose that the active logging roads are important for aterial access for you, but really your into the limited access and the abandoned type roads. The main different between those two being in the guidelines is the treatment of drainage structures. Fisheries certainly has a concern about those limited accesses and abandoned roads because drainage structure only stand up for so long. The companies are usually unable to maintain them after a number of years. The drainage structure is then for part of the problem, particularly for fish passage. So if I haven't had a chance to read your brief, but if you had something add and I won't take the time right now to ask you to, I am really pleased by the way to hear that you are familiar with fish forestry guidelines cause they are an operating principle that we put

a lot of faith in, but if you give some consideration to the limited access and abandoned provisions of the fish forestry guidelines and..... from your comments around how those two areas are treated that would be helpful to me in terms of my interest and your...

Response:
Sure.

Panel comment:
George do you have any comments?

Panel comment:
George is the manager of recreational fisheries for the Provincial Ministry of Environment.

Panel comment:
Rory you mentioned a number of campsites that you would like see established both for RV's and also for the hiker. Do you have any feel for the Nahmint Valley and how many should be in that valley?

Response:
I am not familiar with the use of it. The campsite locations that our outlined in the guideline are pretty good rule of thumb to go by. I don't think you want to make a lot of them because you don't want to over-use the valley, but by the same token I think you have to provide enough of them to prevent people from just setting camp up everywhere in the valley. That can sometimes tend to cause garbage problems and fire problems and all sorts of related difficulties. I have only taken a drive through there this past week, I am not sure how much use the valley gets and it would have to be I guessed determined exactly how much use the valley does get.

Panel comment:
Do you have a feel for the number of wilderness campsites versus the type that you might want to use or recreational vehicles?

Response:
Generally, most of the areas that I have gone into that has vehicle access there is generally not too many hikers using those types of areas, but if you do make the areas accessible for the hiker, I am sure that it might be better to promote more of tenting, camping, hiking type campground than the RV type use. I personally when I go out into the outdoors I usually tent anyways. It is better for the experience, I want to get away from it all, I don't want to cart my whole apartment along with me.
Panel comment:
Thanks Rory.

Response:
Thank you.

Panel comment:
And Rick do you have any questions? Rick Brand is our planning officer with the local Forest District.

Panel comment:
Rory I am glad you took the time to come up here and give a talk. We put roads to bed a lot more often now and hopefully a lot better than we have in the past. Do your people respect that fairly well or do they try and get over these ditches and what not?

Response:
No, it is a position of the Four-Wheel Drive Association that if there is a gate there or the road has been dug up, we don't try and go around it. Primarily, I know a lot of it is done. Unfortunately, our association does not represent everybody in there. We are having problems within our own organization in Nanaimo. We try to respect when a road is closed off or dug up, we don't try and go around it.

Panel comment:
Good, thanks very much.

Panel comment:
I think you have already answered the question I was going to ask which was the type of campsite facilities that you think your type of recreationist would appreciate most in the valley. Obviously, you want at least four-wheel drive vehicle access, but at those sites do you think that you would want to see things like proper toilets installed, I mean high quality toilet facilities or would a primitive pit toilet such as we might have in some wilderness recreation sites be quite adequate.

Response:
The primitive toilet is more than adequate. Some facilities should be there, you don't want to get into there are several areas on the island where we go camping and you get the old toilet paper dropped all over the site as long as it some sort of facility that can be used it is more than adequate usually. It doesn't have to have running water or showers or anything like that.

Panel comment:
Ok thank you very much Rory. Sandy.

Panel comment:
Thank you Rory. I also would like to thank you for making your presentation today. I have one question and it relates to the idea of the buffer zones that you brought up. Just of a matter of interest and just to get to get your counsel on

this matter. Would you like to see a standardised buffer strip or one that situationally depends on i.e. you go in and the size on the buffer strip depends particularly on the environment on that particular area.

Response:
I think probably be more dependant on each application. You can't just say that we want a 100 meters on either side of the road because in some cases that might not be enough or it might be too much. It was just an idea that is being kicked around from my president actually, he asked me to present it to you.

Panel comment:
Yes, and that is certainly something that we consider as well.

Panel comment:
Thank you.

Panel comment:
Rory I don't really have any questions but I am happy to hear that type of presentation you made because it gives me as an elected person on this panel gives me an opportunity to see a different perspective of that valley and that is the say that there is really no conflict between the valley being properly logged and your type of recreation.

Response:
That's correct.

Panel comment:
Thank you.

Panel comment:
Thank you very much Rory. Just as a small .... you have kind of opened my eyes a little bit to four-wheel drive club members. I always imagined that four-wheel drivers were people who just like to roar around in the bush, making as much mud as they possibly could and that four-wheel drive club members simply did the same thing, but in groups. Now I think I have a view now that you actually are trying to promote responsible use which is a good idea and I would like you to stay in touch with us if you would please. And for the general information people here this morning I think our next presentation is around 1 o'clock this afternoon unless somebody comes forward and wishes to make a presentation in the next short while. So we will now convene back to the other room if that is ok with you people?

Panel comment:
Could we have your name and your address? That would be the first thing.

Wayne Wiebe
Pacific Rim Guide Outfitters
Box 1251 Station A
Port Alberni, BC
V9Y 7M1

Ok my name is Wayne Weibbe and I am with Pacific Rim Guide Outfitters and my address is Box 1251, Station A, Port Alberni.

Panel comment:
The box number again please.

Response:
Box 1251.

Panel comment:
1-2-5-1. Thank you.

Reponse:
The postal code is V9Y-7ml. Ok again I apologize I tried, I didn't expect to be here today and I am not really prepared, but. Nahmint Valley is part of my guide area and I have been guiding in there for seven years. The logging basically enhanced my ability to guide. Makes for a lot more huntable animals. There is a myth out that old growth forests is where all the animals, that is animals habitat which is not, there is more animals in the Nahmint Valley today than there was 15 years ago because every logging slash is what provides that food for these animals. And just a point of interest there is probably more people used Nahmint Valley yesterday and today than did that have seen the Nahmint Valley all the 1950's. There is probably more people collectively in there in the last 2 days than the upper Nahmint Valley in the total 1950's and that is basically because logging has opened up the access. People wouldn't be seeing that nice country up in there now if it wasn't for loggers. I take several hunters a years into the Nahmint Valley, there is a fair abundance of black bear, the local rod and gun club was involved in transplanting some elk in there which are flourishing. They are doing really well. For I am just speaking for myself and for my business that Nahmint Valley is far better being logged properly than it is being left in the wild state. I've got a lot more to say but I can't think of it, I didn't come prepared.

Panel comment:
Of course you have the opportunity to write us with any of your comments.

Response:
Yes.

Panel comment:

We are going to ask you a few questions.

Panel comment:

Probably just one question. What type of economic impact does your type of outfit have in this area.

Response:

Probably, the neighbourhood of $250,000 a year and we use local hotels and motels. Local facilities ......

Panel comment:

Thanks

Response:

Your welcome.

Panel comment:

Thank you very much Wayne. I don't really have a question except to thank you again and state that it is interesting to find out a few things about what is occurring. It used to be the guide outfitting in the area, particularly the transplanted elk population. Thank you.

Reponse:

Your welcome.

Panel comment:

I've got one or two questions. You say that the game population or the animal populations are increasing as a result of the harvesting that is going on or logging that is going there could change essentially again in the forest cover. One of the habits or one of histories of British Columbia is that we have tended to progressively clearcut large areas and for a time during those periods a drainage might be adequate for producing a peak of certain types of animals like deer that like the diversity of both the old stands of forest in wintertime and younger or more open areas at other times of the year. It would seem to me and I don't want to put words into your mouth, but would be really critical to your future plans in the Nahmint is that the rate of harvesting be balanced in a way that there is always a diversity of ages of timbers in the valley. Is that correct?

Reponse:

Yes, if they quit logging the Nahmint Valley today, 25 years from now there would be no animals in that valley. They would have starved out. 25 year old second growth has very little food value and has good cover value for it. I wouldn't like to see Nahmint Valley being logged some places where they take and they have two or three mile clearcuts cause the middle of the clearcut is not utilized as for food because animals have to have protection to get back to their, they will operate within a quarter of a mile of a timber line or something. They have to have either timber line or second growth older or second growth to get back into were the big clearcuts the centers are wasted, as far as I am concerned.

Panel comment:
Thank you very much. Rick.

Panel comment:
Yah Wayne thanks for giving a presentation. One of my questions has been answered cause I was going to ask you how you want the Nahmint Valley logged properly because you said properly and I think you have answered that with talking about the size of cut block. But what I did want to know is I gathered guiding must have been fairly good after the 1930's logging so in 1930's when there was crops coming back on those clearcuts the guiding would of been good on there for wildlife species.

Response:
Yes, I guess it would have been I wasn't here in those days and there was very little guiding done there, but basically the only place before they had this division logging in there, the only place that you ever found wildlife in there in the second growth and the old growth was where there were slides and there has to be an opening in order for the animal be able to find food. But you go any place any valley that hasn't got a slides or that hasn't got openings in it cause nothing grows underneath a black forest, there is mice and martin.

Panel comment:
So the guiding before 1975 shall we say when the logging started up again in the Nahmint was not very lucrative.

Reponse:
No. Basically the guiding on Vancouver Island is a relatively new industry as there always has been a limited amount of guiding but basically the black bear populations, the elk populations, and over the last couple of years the deer populations have been increased and guiding has becoming a little more. The last seven years I have been involved in it.

Panel comment:
I have one other question and it may not be in your area. But the trapping up there, do you have any knowledge of how the trapping is affected by the logging and what it has been in the past and at present?

Response:
The trapping I will just give you my opinion, I can't like for facts, but basically most trap lines in this area are hobby trap lines. I don't think anybody makes a living, I could be wrong, this is just my opinion, but the martin are the timber animals be the main thing and other than that you are trapping the river animals which our new logging slashes

are going to affect them for 3 or 4 years and then they are going to be, as soon as they have the cover, they are going to be back in. I don't think of that personally. In fact the trapping it, the roads in there are going to help the trapper is probably the biggest effect it is going to have on it, is the access.

Panel comment:
Thanks very much.

Panel comment:
Thanks for your presentation Wayne. I know you are an angling guide also and I think Nahmint is on your angling guide plan.

Response:
Yes, it is.

Panel comment:
Can you, do you do much guiding in there in terms of angling?

Response:
No I do not. No.

Panel comment:
Have you done any in there?

Response:
No.

Panel comment:
So you don't have a perception in terms of the reparian, the habitat adjacent to streams in terms of what the angular feels should be....

Response:
No I don't sir.

Panel comment:
I don't have any question Wayne, thanks for your presentation.

Response:
Thank you

Panel comment:
I have one last question and I am just curious here. Do you involve yourself in guiding people who other than are, I know you are primarily a hunting guide, but do you get involved much in guiding photographers or people who simply want to see wildlife.

Response:
No because the people that are non-consumptive users of wildlife want to spend very little money at it and I am in this kind of business to make a living.

Panel comment:
Sure I understand that. Thank you very much.

Response:
Thank you.

Panel comment:
You would like to make a presentation I bet. Would you like to make your presentation then. Just give us your name and your address.

Alice Antonelli
Arrowsmith Ecological Assoc.
Box 179
Errington, BC
V0R 1V0

My name is Alice Antonelli. My address is Box 179 Errington. That is the address of the group I belong to, I am sorry V0R 1V0

Panel comment:
V0R 1V0

Response:
That is the address of the group I belong to which is the Arrowsmith Ecological Association. My concern is a little bit more broad than simply the Nahmint Valley, but I am concerned about it partly because it is an important watershed, partly because apparently it is one of the largest old growth stands left in the province, particularly on the island. I feel and this is also the view point of our group which will be sending a written brief to you later. That there should be now a moratorium set up on clearcut logging, clearcut logging of the old growth in that area until such time as the province wide inventory is completed by not just by the company involved but under strict supervision at least of the Ministry of Forests and the Ministry of Environment and Fisheries. This should be from a point of view of such things as what is the genetic pool that we have on the island and how important is this to particular one. What is the importance for wildlife habitat and there I also am concerned with mice which are important little creatures for the undergrowth, I mean I understand that it is not just the undergrowth but the rooting that the seeding of the trees, I understand that we are just starting in forestry research to know what goes on in the root area and I don't think we should log what is left of our old growth until we know a little bit more at least about this. We don't know very much about the soil. I understand that after the 3rd rotation soil on any plantation does not allow as good a growth as the previous two. Ok, elk I think also use the old growth. They weren't mentioned, I

don't know if there are any in there. Ok, so genetic pool, then wildlife habitat, recreation and tourist value. These should be included in such a study, such an inventory so that logging when it resumes will be carefully structured and it will be carefully structured as to road building and maintenance methods of the roads also the type of logging. Horse-logging is doing just fine in small areas. We don't have to be in such a hurry, it is doing pretty well up north BC too. And that is another area where not enough study has been done. So that in the future when logging is resumed there will be a minimum impact on the environment. That's about it.

Panel comment:
Thank you very much Alice. I appreciate that. Does anyone have any questions. John do you have any questions for Ms. Antonelli?

Panel comment:
Just a brief one. I have an opinion on moratoriums on logging when were are dealing with the planning council like this.

Response:
You have a what?

Panel comment:
I have an opinion on moratorium

Response:
An opinion oh good.

Panel comment:
With other planning groups what we have found is that if you establish moratorium on an area during the planning process, the logging doesn't go away it simply occurs in other areas with greater intensity to make up that volume that is the short fall and I wouldn't state a specific example I am thinking of, but it has created a serious problem for the fisheries point of view because other areas that we're logging has been spaced over a period of time suddenly we find a great deal of activity in those areas. So when you are talking of a moratorium I believe what you are referring to is actually suspending the cutting in that area without a replacement elsewhere.

Response:
Yes and a reduction of the allowable annual cut which I know is going to be debatable too, but from the point of view of someone who doesn't make $35 an hour or $50 and still manages exist I feel that our economy will go ahead barrelling as fast as it can unless somebody says "Hey, just want a minute let's look at it" and a reduction in the allowable annual cut would perhaps one of the ways to reduce what you are saying, your problem.

Panel comment:
Ok Alice thanks.

Panel comment:
I have no questions.

Panel comment:
Just one question Alice, actually it is a point of order. You stated that Nahmint was one of the largest old growth stands left on the island.

Reponse:
I understand this, it is not true?

Panel comment:
Did you not mean maybe that it is already not preserved in a park? As there is Moyeha River which is a fairly large drainage in the Strathcona Park.

Response:
Good. This is the only other one that is as large is it.

Panel comment:
It is fairly large yes. I am not sure of the exact hectarage.

Reponse:
That's good. Point taken, thank you.

Panel comment:
I have no particular questions thank you. I just one short one. You are aware of the Old Growth Working Group that's currently working in our province.

Reponse:
Yes. They are struggling.

Panel comment:
Sandy

Panel comment:
Thank you very much Alice. I don't have a particular question. Thank you for your presentation.

Panel comment:
I don't have anything Bruce.

Panel comment:
Thanks appreciate that. I think Malcolm you had requested to make a presentation. So how are we doing for time here. Yes, we can carry on here. You have fifteen minutes or there abouts. Give us your full name and address please.

Malcolm Robertson
#5 639 Kennedy Street
Nanaimo, BC
V9R 2J9

Well, first of all thanks for this whole show. This has been really encouraging and effected different view points were out on the field yesterday and are here today now and we are not at daggers drawn, I think this is really auspicious. I am here with at least two hats. The first is a concerned private citizen and under that heading I have some ideas that have come more clearlier as a result of yesterday's visit that I might mention at the end of this more formal presentation, which I putting in not only on my own behalf but on behalf of Western Canada Wilderness Committee in Nanaimo. Once again it is a slightly larger look at the problem, but different people on the committee that I met yesterday are concurred with my sense that it would presenting. It is called Jobs and Trees. I guess at this point it is useful to mention that my background includes 4 years in oil field exploration, 5 years in the construction industry and a bunch of years in banking. This working paper grew out of a conversation at Wild Wood Tree Farm, Yellow Point BC on June 2, 1990. Merve Wilkinson, Peter Chatterton and Malcolm Robertson, met to discuss our reasons for believing that environmentally sound forestry meant more jobs rather than less. The three of us have nearly 100 years of relevant experience. Our conversation helped many more examples and ideas then those given in this paper, but we agreed that this paper was a useful summary. 1) We share the concern of IWA members for their jobs. Raising a family costs money. Jobs are the way most of us earn that money. We also share the sense that changes in logging practices and forest management are required for those jobs to continue. It is also clear that changing to environmentally sound logging, will mean more jobs. There are more jobs available now waiting to happen. We go to the forest to cut wood. We could go to the beaches or to clearcuts and salvage the billions of board feet presently lying there. Merv Wilkinson made a canoe trip in Nootka Sound two years ago and saw a 75,000 board feet of good wood, bark still on, on a beach 200 yards long and 16 yards wide. On Cortez Island a resident salvaged 4,000 board feet of useful wood from a small corner of a 100 acre clearcut. More jobs are also available in wood products of higher value such as moldings, or log houses are produced. More jobs because of the extra work involved and more money produced from the same amount of wood cut Capucci Lumber making mouldings in New Westminster was a father and son operation thirteen years ago. Now they employ 62 people. Much of the wood used in the production is slabs formally regarded as scrap. Stubb and Heard are making log houses in Mission BC and exporting to more than thirty countries. One truck load of trees keeps five people working for five months. One truck load of trees keeps a few people busy in a pulp mill for well about half a day maximum. Our present paper mills are surely convertible to running on recycled paper. Modifications will be required on the intake side and in the plant, but millworkers are a crafty bunch and we have the technology. Let us save the capital costs of putting up new buildings. Let us save the mill towns and they will in turn save us. People raise families, machines do not. The displacing of people from jobs by mechanization in the forest is false economy. In many cases the jobs are better done by people who spend there wages locally best providing income for a whole other group of people in the community. Ed McBride in the upper Fraser Valley between Prince George and the Yellowhead pass, local people didn't cotton to helicopters flying around spreading herbicides to kill ground cover thick enough to hold back new trees. For the same sum of money, the work was done manually. The cutting checked ground cover long enough for the new trees to get enough light and nourishment to grow above the returning ground cover. The cut down provided mulching around the new trees. Dozen of people earned good wages that summer, young and old and inbetween. An added benefit was the growth in the sense of community spirit. We are convinced that the future which holds both a healthy environment and a sound economy also holds many different forms of environmentally sound logging. It also holds diverse forms of sound economic structure, solo shows, family shows, forestry cooperative and community logging companies. We wonder if the IWA can assist its members to establish such enterprises. It has the money and any government wanting a chance of re-election would help. Looking overseas we find much to encourage us and to copy. Sweden and Switzerland have stable forestry communities, generations strong and going strong. They get more than five jobs from the same amount of wood that gives us one. In the USA the average is more than three jobs from the same chunk of wood. Let the government remove the administrative road blocks to smaller scale and healthy forestry. Let the government change those elements of the present forestry system that are so biased toward massive corporations in making decisions so far from the trees they can't even see the forest. Given these simply changes, we believe that loggers, their families, and their communities with the help of the unions can make this province shine. That's the end of prepared text. If you want to hear some of the personal stuff briefly that came clear from seeing and talking with people on the ground yesterday, I can do some of that. Well three things seem to be clear and one is that the Nahmint Watershed is just about an ideal example of an area which the development of which can be supervised by user representatives of user groups. The kicker then is what is the composition of that user group and it has got to be reasonably small enough so that it doesn't take forever to get all those people together. It is clear that you would want to have a representative from the forestry outfit. Mac & Bloe in this case. A representative from the IWA, a representative from the Ministry of Forests and or Environment, and a representative from the native side of the question, the indigenous people's side of the question. It is also vital to have at least three spaces for representatives of the public. One of those spaces would be for somebody who's like yourself, Mike, already serving as an elected representative. The other two would be in one case, an example would be, for somebody like Jim Gillespie, a guy who is informed and cares deeply about the thing. Who also wears a hat connecting that person to the Fish and Game Association and the third would be another informed citizen who is likely also a member of another group. There would be a number of ministries that would want to be, and organizations that would want to be kept informed with minutes and related documents and agendas without actually needing to be there at meetings. Meetings wouldn't have to be all that often. If we had this kind of a gathering four times a year with a little more lead time, like three to four weeks lead time, so we could have as well as the day or two days on the ground, we could have in the malls in the region that this kind of set up. Time to inform the schools, the secondary schools so that kids can have a chance to put it all together. As you say there were more people in the Nahmint in the last two days and what did you reckoned over the last 15 years all added up. In all the 1950's put together and those, that is one of the strength I guess of where we have come to is that the public interest is there and it is a matter information so that people can make the better decisions the decisions that reflect more fully everybody's concern. And that leads into the second point that came clear yesterday in conversation with yourself Ernie and Jim Gillespie and Dave Bishop and few other people who's names are not on the top of my head this morning and that is that we have a strong sense that there is a viable financial alternative to logging in that watershed and it is related to tourism and it is related to wilderness and related to wildlife, but we don't have the documents that show us the economic viability in the way that we have the documents that show us the economic viability of logging. However, we know from experience elsewhere that the data exist and that good projection could be made very quickly as far wages and jobs in uses of the watershed other than logging. Dave and I agreed that with the right people you could reasonably expect to have those projections in six weeks and there is obviously some further talking to go on in the next few days. Where we can get those numbers in a hurry then we have some then suddenly the presentations that your making about guiding and your making about four-wheeling and the women from Arrowsmith Ecological Society is making are in terms that I can take to banker friends and you don't have to talk about Nahmint and you don't have to talk about the scenery, you can just say look it is worth this much over ten years if we log it. It is worth this much over ten years from non-logging uses and that ten year income is there every ten years from non logging uses. Likely increasing and the logging income is always there, like money in the bank, not cutting now doesn't mean you are not going cut then. Do you know what I am saying? Ok. I think that developing projections of income and jobs from non-logging uses that has got to be very very high on the agenda of, from now on, of this group and of any follow up group. Coming to talking cutting if cutting is to happen there, there was a general sense of agreement with the people that I talked with that small clearings linked by small trails, the size that is required by small skidders or horse logging shows are going to be a much more acceptable form of cutting for almost everybody concerned. You spoke of the of what happens in the center of a large clearcut. You gave us the figure of a quarter of a mile, so as being the maximum that an animal will work to, so if you make your small clearings approximately, having a maximum diameter of substantially less say an eighth of a mile then you've got lots of edge and you've got the little trails that works well for the animals, it works well for potential tourists use, it works well for settlement use that may be related to tourist use. Because you're dealing with cutting it with, it has much less impact than the larger cuts a person can say to the logging company, "OK, we are not going to be, your not going to be cutting this chunk out of here, but you can cut that amount of wood or that amount of square meters however you want to measure it" and maybe enough a bit more, but it is going to be dispersed over this larger area. So if it comes to that the accountants and the money people who are the places where decisions are often finally made in the logging companies can say "Well Ok. This isn't quite the way we had it figured, but we are still balancing our books and little bit." Those were the three main things. There was one minor thing and it has come up again today on two previous presentations and that is buffer strips, buffer zones. And that relates to the practicality of making decision in a watershed, any watershed, but the Nahmint is an excellent example on a situation by situation basis and that is that you have buffer road edge, you have buffer river edge, you have buffer cliff edge. A good rule of thumb is make the width of your buffer zone the height of your tall timber at that edge, so the river, there is the river, there is the minimum width of your buffer zone, but a cliff you don't that kind of growth. You might get that much growth on a cliff edge cause it is not such kindly country. That is the width of your buffer zone. When you are putting a road through that is the width of whatever the tree is that's the buffer zone. So there is a few, there is a very few, not much more than a handful of simply principles like that, that can make situational decision making in forestry terms, in wildlife terms, easy to cope with. I guess that is about it.

Panel comment:

Thank you very much Malcolm a very interesting presentation. I think we will start with Mike if you've got some questions?

Panel comment:

Thank you Malcolm. I guess the first question is perhaps you can clarify you made a statement that in the value-added loghouse building sort of a situation, one truck load of logs employs people for five months and then you followed that up by a statement that when the truck load of logs goes to the pulp mill, it only last minutes, which is probably factual, which it didn't say, could you tell me where you get your figures from is that there is a difference of the amount of people in that industry and in otherwords, the way I see it in a pulp mill there is 1,200 people say, but on the log house construction again you see two or three in what economic impact does that have on any community. In otherwords what I am trying to ask is do you have the dollar value out of that truck load of logs and also the comparison of the grade of logs that are being used in each job?

Panel comment:

Good questions!

Response:

I don't have those numbers with me today. There is additional jobs created out of the log house situation because there is doors, windows, interior fixtures, there are the people that ship the stuff, there are the people that ship it, often they are not the same people that turn those logs into something that is built and taken apart and shipped over seas, right. I guess the one thing that occurs to me although I don't have facts and figures is that we have 1,200 people employed in a pulp mill, the pulp mill your citing it as an example now. For how long?

Panel comment:

How long is that pulp mill going to run?

Response:

Exactly. It is a finite number isn't it. We are probably going to be, we are probably both going to be alive when if the pulp mill is still running its using other feed stalk than just raw wood fibre, but that log house operation, that is the thing that can go for generation after generation after generations, so that is the other thing that has to be more in mind when we make those straight across dollar comparisons.

Panel comment:

In other presentations there were people advocating logging through more high lead so as not to endanger the environment, but in your presentation I am very interested in this. You were saying smaller openings and a lot of people are saying that as well, but you are saying skidding then with small skidders, now that would mean plowing up the ground. How do you equate that?

Response:

Well, I've seen Merv Wilkinson forest as you may have also, down in the Yellowpoint there. He has been doing selective harvesting for 45 years on a 5 year cut cycle. So his skidder trails are well established and the, sure the trails weren't there before they were put in, but after 45 years of use what you have is a patch of bare earth maybe that wide for the tires run and you know the tires on a skidder eh, we are not talking about a lot of pounds per square inch. It is not like a catapillar tractor tred. They are pretty earth-kindly, it is pretty earth-kindly. I mentioned small skidders because that is a useful dimension. You get them much bigger than that and you have to go to gravel and hard pan and road building to stand the weight of big trucks and then you are talking a significant impact.

Panel comment:
And I have just one more question and that is you mentioned tourism. How do you view tourism in Nahmint Valley? And suppose logging was to stop and it became tourist attraction, who would maintain the roads and everything else, what is your idea of an infrastructure to maintain that tourism industry?

Response:
Well that's a pretty big question. I think that the costs of maintaining the infrastructure should be shared by the outfits that derive income from the whole zone. I can see the forestry companies still having a stake in it. I mean if I was employed by Mac & Bloe, I would say look this is a responsibility we have held for many years and with no argument. There have been times in the past when we have been irresponsible or we haven't had, we don't know as much, we didn't know as much then as we know now, but we still have an interest in this land and what happens to it. We have people that we want to keep employed or we would like to go on seeing employed. We've got road building crews. We'll maintain the roads, we'll trim up the edges so that they are kind of neat and keep an eye on that and we've got the machinery to do that and we'll levy a user fee, this is to be negotiated, right. We'll definitely want to be levying some kind of road maintenance charge. That is just part of the costs of operating the unit, when I say unit I mean the watershed. The people that are running tours in there, first of all I see it as being a place where there is room for four-wheel access up at Gracie Lake and the jumble of rocks there is with a little rehabilitation of green, there is ample space for four-wheel camping. Down along the lake on some of the roads I can see places where people would be more than happy to be dropped off with the bare minimum backpack thing and there is a kayak or a canoe and they make there way down the lake, rendezvous with the MV Ladyrose. I can see that there is going to be another category of adventurous spirits that are going to do it on windsurfing boards and mountain bikes and stuff like that. And part of the fees that those people pay for those tours is ear-marked to pay for the road construction bill, Ok, but I

would see tourism use in the Nahmint Watershed as being very low impact, just period, not allowed to be otherwise. And there is a lot of people you could only have to look in the Times-Colonist or in the Globe and Mail there is companies, that are packaging adventure tours and there are all kinds people and holding on to their briefcases and leaning into the wind in New York, and Las Vegas, and Toronto and Los Angles. I know some of these people are my friends and it is like they here is a $1,000 give me five days complete change of pace, right. I mean if they are not feeling like riding mountain bikes then they can ok here's the backpack and equipment we will just go up here and sit on this hill for awhile and you can tell me about, so whatever, there is quite a possibility for quite but intense recreational use of that and that kind of tourism isn't a kind of tourism that is going to louse up the guiding seen, it is compatible with four-wheel scene. So those are just three types of guiding ecotours four-wheel that are non logging uses of the watershed that would provide income year after year after year.

Panel comment:
Thank you Malcolm I don't have anymore questions.

Response:
Your welcome.

Panel comment:
Thank you Malcolm. Very interesting presentation. I have one question, it is more a point of clarification at one point of your description you were talking about community forestry. I am not sure if you actually used the term, but generally talking about community forestry and just to clarify are you talking about the philosophy as we had heard mentioned not today, but at previous public information session, of transplanting a community to the watershed that would be a self contained community. Dealing in all sorts of different things but princiably a forestry related selfcontained community or the more tradition stance which would be something more looking into a municipal force such as North Cowichan Municipal Forest?

Response:
The phrase that I use that I think that you are asking about is community logging companies. And what I have in mind for when I use that phrase is and existing forestry community in the first place that says we can see our way clear to setting up a logging show, a forestry show that let us derive our income from forestry work in this area. There has been quite a bit of work done and quite a number of models established, you know, actual, when I say models that's a poor word, people have actually set up community-based organizations that have an economic life and provide work for people in the community. I am not talking about transplanting a community and plunking it down. I am not necessarily saying don't do that, but I am talking about build on your existing communities because so much of the money has already been spent for roads, for

housing, for schools, for sewers, blah, blah, blah....

Panel comment:
Thank you.

Panel comment:
I am left a little bit confused here. I am going to ask you one question which I hope will clarify that. Are you in support of logging in the Nahmint Valley in principle given, we'll talk about the environmental impact of it, but are you in principle, in favour of or against more harvesting in the Nahmint Valley?

Response:
I really don't I have all information that I need to come down on one side or the other of that question. Until I see some projection of the kind that many of agree that we need as far as income and jobs from non-logging activity. Until that is before us, I wouldn't want to say.

Panel comment:
That's fair enough.

Response:
Yes or no.

Panel comment:
No I was left a little unclear and I wasn't sure if you were clear in your mind or not about it. Now I understand you were saying that you haven't yet heard all the information, you wouldn't want to make that determination.

Response:
I could see that there is strong arguments on both sides.

Panel comment:
Yes. Do you think that the decision, and I don't want to put words into your mouth or put you on the spot here, do you think the decision should come down to a financial choice?

Response:
No, I don't think that purely financial choice should be the soul, should be the should governing factor and how the decision goes. However, it must, whatever decision and series of decision are finally made about the Nahmint Watershed, must be demonstratable to the sound financial decisions as well as sound, aesthetic, or ecological ones.

Panel comment:
Good, excellent, thank you.

Panel comment:
Good presentation, Malcolm.

Response:
Thanks

Panel comment:
I just wanted to clarify something. The committee that you were talking about is an advisory committee or a followup committee, that would be after the plan is in place, an acceptable plan is in place, that is what you are talking about?

Response:
Well that would seem to be, I mean there is already this review panel and it has a life of its own and it is has to complete and it is already doing a lot of good work on that task and things get jumbled, on the organizational chart if you start adding people in mid-stream and stuff like that. I mean you can tell me more about how acceptable that would be than I can you because you're on the review panel yourselves right now. But as you lay it out just there, it would make a lot of sense, structurally speaking to say "Ok, we did all of this consultation and we did our graph and here is the revised draft and we have a pretty whole hearted response to this revised plan and here is the, along with the revised plan, here's our suggestion about how that plan's implementation be monitored"

Panel comment:
Ok that is what I needed know. Secondly, go back to something that Mike was asking. When we get into terrain that is not friendly, shall we say, to horse logging or small skidders, what do you think about high lead logging in some areas that would not be conflicting other resources shall we say?

Response:
Well once again, you'd need I would want to see this specific areas to have before saying "yay" or "nay". I would also want to look over those specific areas with guys like Merv Wilkinson that have done a lot more logging than I have done which is pretty limited. So that there is people who are, there is technical, there is a technical opinion that is needed that I am not qualified to give although I feel as I am qualified to say I find better decisions are made by looking at a given situation and saying ok high-lead here or gee you know we have got a dozen trees here that we would really like to get out that we can see coming out of here without any problem and we can do that in a day's work with a helicopter. You know.

Panel comment:
Ok so you are fairly opened minded about that.

Response:
Yes

Panel comment:
My last question is tourism that you've talked about. Do you see that being publicly run or privately run.

Response:
I see why there couldn't be a mixture of things. I mean most tourist operations are privately run, but there are a number of tourist operations which are successfully run which are have a significant component of public ownership. I am thinking of the tourism that pours hundreds of thousands of dollars in to the tribal coffers in southwestern United States for instance.

Panel comment:
Ok. Thanks very much.

Response:
You're welcome.

Panel comment:
George.

Panel comment:
Interesting presentation Malcolm. I just need some clarification on your buffer-zones. Would you allow any kind of development in those buffer-zones?

Response:
Once again it would depend on the particular place and it would depend on the proposed development. There's one idea that flashes across my head right now, is that say we have a particular area of a buffer-zone that offers a particularly gorgeous view of a wildlife crossing or a watering hole. If I was a tour operator or if I was on the review committee listening to a tour operator talk about what they might like to do there, I would be really interested in proposing something that was virtually invisible a development that would need to be, if it was going to have the value that it is being proposed to have. But I am quite comfortable with stuff that let's people get as close as they can to wilderness and to wildlife without disturbing the wilderness and the wildlife. So I think there is possibilities where in buffer zone or you could say Ok we'll allow this kind of development. I don't think opening up a bunch of buffer zones so you can have riverside cottages. I mean, I have a very different feeling about that kind thing.

Panel comment:
But relative to the buffer zone again, but you wouldn't have a problem in terms of connecting a trail system for example down the buffer zone and let's say from the Nahmint in the ocean right up to the perhaps Nahmint Mountain? Do you think

that kind of development would be compatible in your view?

Response:
I think that it is a marvellous idea. I hope it happens, now I don't know whether I think the times from when that trail gets into the buffer zone at the river's edge is something that has to be considered very closely. There is, I have seen trails like that at water's edges. There is one in Nanaimo in Millstone Stream. I don't know, if I was, that's a big river for fish we are talking about there, ok? I mean, and some of the most marvellous views of it are not at the waters edge, but are from the hillside above. There are some places where, where the trail can come to a rough outcropping or to a bridge such as we at the other day, you know, where that river is just like a great big gorgeous chunk of jade that is alive. And I think that some of those kind of views are valuable. But as a general rule it is like leave those buffers zone, you know, think 9 times before you permit anything to go on into a buffer zone. Some of those views from the higher ground, down onto the river, they are just marvellous.

Panel comment:
Thank you.

Response:
Your welcome.

Panel comment:
Well thanks Malcolm. Once again any excellent presentation. I enjoyed our conversation yesterday as well.

Response:
Thank you.

Panel comment:
I don't have any questions that certainly would require, with those answers you gave on buffer zones, answered my last question I was going to purpose.

Panel comment:
Ok, thank you John. People I think we will have a brief break now and I have, I can't see the schedule, but I think our next presentation, oh I'm sorry .... what about you guys do you want to carry straight forward here. Let's have a look.

Panel comment:
That is Mr. John Bassingthwaite who is making a presentation here today on behalf of the share our Resources Group from Port Alberni. Bobby Caldwell had reserved the time but John is going to speak in her place. Thank you.

John Bassingthwaite
Share Our Resources
Port Alberni

Thank you for allowing me to speak this after noon. As you said my name is John Bassingthwaite and I am the chairman of Share Our Resources in Port Alberni. Share Our Resources is a volunteer organization based in Port Alberni. We have been in existence for two years and currently have 1,100 dues paying members. The formation of our organization was initiated by the ever increasing amount of land use disputes which have been occuring in the province. Our society believes that the forest of British Columbia should be utilized to their fullest capacity under the auspices of a sustained yield and multiple use program. This results in maximum benefits to all people in the province from the land base. The intent of our presentation to the taskforce is to provide an input on the overall land use strategy for the Nahmint. Based on the personal observations and reviews of the original folio and it's amendments. As a volunteer organization of people from all walks of live, we do not feel that the need or have the expertise to make recommendations of a technical nature or on a site specific basis. We will leave that task to the professionals of the taskforce. What we desire is make known our mandate of multiple-use and preserve special places, protect the working land. Our recommendation to the taskforce can be viewed in the terms of our philosophy towards forest land, utilization in Nahmint and general recommendation that can be applied for more specifically in the watershed. Land use philosophy, our basic philosophy for the Nahmint revolves around the role this valleys plays in the future viability of the Sproat Lake Division and it's 250 employees. At present in excess of 25% of the central Vancouver Island is currently under some form of preserve status in Strathcona, Pacific Rim, and newly created Carmanah Park. Our society believes in the need for preserving special places, but we also believe that is already enough protected wilderness in the vicinity. There has been logging in Port Alberni area for 100 years. In the past old-growth timber has been a basic building block of the industry and a catalyst which created the city of Port Alberni. Regenerational to second-growth stands have not reached maturity. Until they do the role of the old growth timber is as important to local employment as it was in the past. The Nahmint contain 34% of the remaining old growth timber under Sproat Lake Management. It is a vital component in the viability of the operation due to its winter logging opportunities. The Nahmint must be kept in the working forest to ensure the long term future of Sproat. Our society believes in the concept of multiple use. Carefully planned road development of the valley is compatible with the concept of multiple use. As this provides wheeled recreational access which can be used for a variety of purposes by a diverse cross section of people. Our recommendations specific to the Nahmint are: Preservation. A permanent set a side should be established in the vicinity of folio area 15. This reserve should include the beaches at the north end of the lake. The stand of boom-stick size fir adjacent to the beaches and the waterfall canyon complex along the Nahmint up stream of the beaches. It should be connected by a shore line set aside to folio area 11, Blacky's Cabin. Total area should not exceed 100 hectares. The land base involved in this set aside should be delineated on maps and the timber removed from TFL 44's AAC calculations with the exception of a small reserve around the campsite, this should be the only land withdrawal from the TFL in the Nahmint. Forestry: An intensive silviculture program should be initiated in the watershed with the intent, I'm sorry, with the intent of reducing the AAC loss, caused by set asides elsewhere in the drainage. This should involve commercial-thinnings in the older second growth and in the lower Nahmint. This program should be financed through the stumpage appraisal system with a fair allowance given to the licensee to encourage compliance. Logging area design location, size and visual impact should be based on Ministry of Forest Landscape Management Handbook and June 1, 1990 Ministry of Forests, Coastal Planning Harvest Guidelines. Riparian areas should be protected by selectively logging the stream side management zone. This zone should be as wide as possible on the site specific basis. Folio areas that were previously designated as no logging, folio area 6, should be selectively logged. The intent would be to removed some timber and at the same minimize the impact on recreational opportunities. Cut banks and fill-slopes should be hydro seeded on access roads to the Nahmint and those which are visible from the Lake. Recreation: In the 1975 folio consistent reference is made to the recreational potential and a recreation values of the Nahmint. At that time these statements were educated guesses. The recreational aspect was the driving force behind the folio. Many of the decisions made in 1975 were based on the assumption of public use and appreciation of the recreational opportunities in the Nahmint. To assist taskforce members in there deliberations on recreation questions in 1990, an effort must be made to determine the recreational use of the watershed over the last 15 years. The answer would be an important component in determining the amount of time, money, land, and human resource needed to develop the recreational resource in the Nahmint. Under the assumption that the recreational potential and values are equal or greater to those envisioned in 1975, the following recommendations are offered. All recreational development should be funded by the government. This is in response to the logic of what the public wants, the public should pay for and that work of wheeled access, campsites, and boat launches should be established throughout the watershed with locations to determine or the taskforce based on recommendations of an independent consultant. A signing program should be initiated on forestry roads leading to the Nahmint, explaining the forest history of the area. A trail and trail head should be built to Mount Klitsa. The development of an industrial heritage site should be encouraged in railway logged lower portions of the Nahmint. This could involve erection of a display of renovated old-time logging equipment accompanied by an interpretive sign program. Administration: A procedure for annual follow-up to the eventual product of the taskforce should be established. The results of these annual affairs should be made public in local newspapers. The make-up of the follow up committee should be identical to that of the taskforce. Policy statements from the taskforce should be formulated so that sight specific application can applied. Fisheries: The feasablity of the fish ladder on the lower Nahmint should be determined. Conclusion: The mandate of the 1975 taskforce was to develop a multiple use strategy for the Nahmint Watershed. Share Our Resources believes that this mandate is still valid. On the basis of this belief, the duties of the 1990 taskforce involve replicating, I hope I said that right, the 1975 process and establishing a format to ensure that the recommendations of the taskforce are fulfilled. This is particularly true of the recreation component of the management plan. British Columbia is dependant on it's forest lands for the economic health of the province. On a smaller scale, Port Alberni is dependent on the Nahmint. Keep the Nahmint in the working forest. Thank you.

Panel comment:
Thank you very much for a very interesting presentation. I personally appreciate the fact that you really made an effort to come to grips some of the specifics in the valley. That is a great and immediate help to us. I have a few questions that I am sure others here do as well. Mr. Brand do you have anything to say?

Panel comment:
Yes, thank John that was good. You did give us a lot to chew on there. Talking about your trails and trail head to Mount Klitsa, do you see that involving any forest left in the upper valley, in otherwords, no cut blocks within the trail view and when you get up to Klitsa which would be a wilderness type area, would you suggest, is that what you are suggesting.

Response:
I am not suggesting that we hide logging from anybody. I am suggesting that logging should go on where logging is supposed to go on. The set aside areas would be set aside and the trails would be built to the Mount Klitsa area and that I believe is in the multiple use stratagy that the SOR believes in.

Panel comment:
Good and one other question. The follow up committee that

you are talking about. Do you not think that public should be on that follow up committee?

Response:

We're not opposed to the public being on the follow up committee. The Tsitika had an excellent follow up committee and we are not opposed to that kind of that committee, we do believe however that it is important to have experts on the committee that know basically what has to be done and have the expertise to do it.

Panel comment:

Good thank you.

Panel comment:

Early on in your presentation, you mentioned we have enough wilderness already. I am not here to challenge you on that view point, I want some clarification. Did you make that statement essentially when you are talking of wilderness for public recreation uses, or do you see other purposes for having areas wild besides just enjoyment? Things like maintaining gene pools or maintaining a natural area in order to have it as a base-line for comparison with man's influence in other areas. Are you talking in that area as well?

Response:

I am very glad you asked me that questioned because there is a lot of confusion in British Columbia today and in North America in the term wilderness. To some people wilderness means no access what so ever. I find that difficult, for me as a British Columbian, to have an area set aside, a large area set aside, that has no access for the public to enjoy the beauty that is there. The wilderness areas that we have in British Columbia now are very immense, difficult to get to, very little road access, and what I would like to see is to maintain the wilderness areas that we have now. If we find a unique area that is beautiful there should be access put in so that people of British Columbia can enjoy it. We need the gene pool there needed desperately by all provinces and by all countries, but those gene pool don't have to be immense areas of hundreds of thousands of hectares set aside that nobody can enjoy them except for the very hardy and that is the problem I have with them.

Panel comment:

Ok, you clarified your point, thank you. You mentioned at one point that you think that you intent, I think I heard you correctly, intensive forestry, in otherwords tending of the forest after it has been established, should be funded and you think it should be funded through the stumpage appraisals systems which is another way saying that the public should in some way except the costs of that intensive work. Do you think therefore, and I don't want to put you on the spot you are welcome to say "I have no answer here", but do you think if the public funds such forestry activity, that it should be up to the public or up to the government to decide who gets that extra timber. That one of the problems we have on tree farm licenses is that the lands are managed within the boundary for the purpose of it usually a single company and we have a problem in British Columbia with the concept of spending public money for what may be viewed by many to be a private benefit that could flow, down the road. Now, there are various ways to approach this solution, and solutions will be found. Do you have any thoughts on the subject?

Response:
Well it is a very difficult question. One in which I am sure the average person like myself could hang himself thoroughly, but I do believe that when we talk about stumpage rates and the benefits that intensive silviculture could benefit from a portion of those stumpage rates. Instead of sending the money to general revenue, which the government of British Columbia now has been doing for some time, I believe a portion of that money and a goodly portion should be set aside for intensive silviculture in this province. Now to your question about who gets the benefit of it. If you have a TFL, the TFL is made up of not only crown land but private land that rolled in and a contract was signed, basically saying that the person responsible for that TFL would have the right to go back to that timber once it was harvested and replanted again and I believe that they should be the first to benefit. There are cases where may be that won't happen or can't happen, but I believe that if they are willing to go into a joint program and we may have to look at that with the government uses the stumpage rates to introduce intensive silviculture then the companies could also kick in some bucks too. I don't think that it is just a one way street.

Panel comment:
You answered my third question which was regarding the make-up of the taskforce. I think Rick asked the question and you made it clear. The other point John is I just simply couldn't follow the last, just your summation and if you would just run it by me just one more type. Just in brief form. You were making some summary statements.

Response:
The mandate of the 1975 taskforce?

Panel comment:
Right, Right.

Response:
Was to develop a multiple use strategy for the Nahmint Watershed and that was and that still is in effect now. We believe that the mandate is still valid, i.e. that the multiple-use in that area is the way to go. We don't believe total wilderness is an answer to, it will only add to the

problems of valley today. On the basis of this belief the duties of the 1990 taskforce involve, this word i didn't want to put in here but I had a friend who wanted me to so, replicating the 1975 process, which means bring it back up again and using that process, and establishing a format to ensure that the recommendations of the taskforce are fulfilled and basically what we are saying that was a taskforce in 1975 was set up to look at all the multiple use in that area and that is the way we should be going in 1990. The recommendation that I am making today are some add-ons but they still follow the guidelines of multiple use in the Nahmint Watershed.

Panel comment:
We do thank you very much. Sandy.

Panel comment:
Thank you Ernie.

Response:
I just might add one thing on that last question there. To do with, should the people who have the TFL, if intensive silviculture is performed. My own personal opinion that is that if you asking somebody to do intensive silviculture in the hopes that they will gain the benefits of it and then later on take that land away from them, it kind of takes away from the incentive to carry on the process of intensive silviculture. If I was a business man and I was going to put a lot of effort into my property and then have a portion of it taken away when I was finished, I would find that I wouldn't be as enthusiastic the next time.

Panel comment:
Well I appreciate that. My question was not directly related to the land-use question but to the how to share in the benefit of a publicly funded activity and there is a measure of different opinions on

Tape Ends

Tape resumes after short interval...

Panel comment:
Can you expand on that. Did you have any other ideas on how you would enhance the resident fish population?

Response:
Geez, funny you should bring that up. Share Our Resources is involved with Bob Griffiths, and the Nuu-Chal-Nulth tribal counsel and we have been looking at areas in the valley that we can start salmonid enhancement program and we were very successful in the Ash River. We believe that only time will tell, but we believe we were successful. We put seventeen truck-loads of gravel into the Ash River, just underneath the Ash River Bridge, in order to have a base for the Steal head to come up and lay their eggs. It was a lot of hard work but we felt good about it and we think it is going to work and we're going to do the same thing Tuesday, this coming Tuesday, in the Nahmint River. And we have asked for the help from the 442 Squadron in Comox and they are going to utilize their helicopter and their going to bring it down because it's extremely difficult to get to that area and their going to drop it in the river for us and if there is any moving around, shuffling around, the groups are going to be there with their shovels and....

Panel comment:
Thank you very much John I appreciate that expansion.

Panel comment:
Thank you that's an interesting piece of information. Don't drop it on the heads of any steelhead that are there to .....

Response:
Hey, well we've got a perfect plan in sticking my head under the water and me hollering "Look-Out".

Panel comment:
Thanks John. Thank you for the copy of your brief. For those who have been waiting, Mr. Reed here is the manager of Recreational Fisheries for the Provincial Ministry of Environment, he has joined us now. Thank you.

Panel comment:
Our next presenter is Tibor Jando and you are the manager of Sproat Division?

Tibor Jando
Sproat Lake Division - Manager
MacMillan Bloedel

That's right. The intent of my presentation here today is to address some of the specific problems strictly from Sproat

Lake Divisions point of view. I feel that there is a general lack of appreciation in our standing, what the Nahmint Valley and it's long term plan means to Sproat Lake Division and also I feel in the previous presentations people readily dump the Nahmint Valley in with the problems and the issues impacting the entire Tree Farm License 44 of MacMillan Bloedel. I would like to point out that although Sproat Lake Division is only one of the five woodlands operations that are supplying the logs to the converting plants in the Alberni Valley. Sproat Lake Division has some very unique and very important operating factors that need to be considered in any long term planning for the entire division or part of the division. Sproat Lake Division is the oldest logging operation in the region. Consequently, we now have a very large and healthy second growth forest resource. In fact on the basis of our entire forest land the split between second growth forest and the old growth forest is evenly split - 50/50. However, there is another factor that we need to look at when we examine our old growth inventory. Sixtyfive percent of Sproat Lake Division's old growth inventory is high elevation very low value timber and at times requires special processing and special methods in order to get any value out of it for the Division. On the hand, the Nahmint Valley, which contributes to about 35% of our annual cut contains our best and highest value timber. Therefore from the economic viability of the division, the Nahmint Valley is perhaps the most important watershed in our entire forest land jurisdiction. However, even more importantly for Sproat Lake Division and the employees that work at Sproat Lake Division, that 35% of annual cut that comes from the Nahmint Valley provides a 90% of our winter logging chances during the December to April period. For this reason any reduction from the present annual cut contribution from the Nahmint Valley will have very serious consequences on Sproat Lake Division. I would like to emphasize that without the Nahmint Valley, Sproat Lake Division will have practically no winter logging chances and the division will be reduced to an 8 - 9 month operation with very little employment opportunity for Sproat Lake Division people during the winter months. There were some suggests made in earlier presentations here and in previous locations that may be there is an alternative. Well, from my point of view and I would like to make the statement on behalf of all the people at Sproat Lake Division, that there is no option for us log elsewhere and there are some economic and practical reasons for that. Not including the Nahmint Valley 1/3 of our Division's forest land base is situated along the Alberni Canal, along the shores of Sproat Lake and in view of the travelling public on Highway 4. Now this excluding the Nahmint Valley, 1/3 of our land base is already a effected by special treatments, special logging methods, aesthetic values, considerations, and the whole host of restrictions that are onerous and costly, neverless that we feel that are necessary and we in our long term planning at the division, address this problems to minimize the impact of these high visibility areas in terms of public perception. However, there are instances and particular locations with in this 1/3 of our land base.

We are already being attacked and asked to stop logging or defer logging or not to log at all because people object to seeing logging from their backyard and from their front window. Geographic reality for Sproat Lake Division is such that 1/3 of our forest land is visible to the communities and to the travelling or boating public. It is also a strong reality that our people at Sproat Lake cannot and don't want to log somewhere else. Our people and our equipment are geared and committed harvesting all our timber resources including the Nahmint Valley on a even flow and on a seasonal basis. Eighty-seven percent of Sproat Lake Division's employees live in Port Alberni and are a really important part of the community. In addition to this social, cultural, and civic involvement of our people in the community. The Division as a business unit, contributes to the economic base of the community annual, $14 million in wages and salaries and $2 million in goods and services that the division buys from the local businesses. As I have been associated with the division more specifically with the original Nahmint Resource Plan since 1978, from the forest management point view, I would like to state that I believe, in fact I know, that we carried our harvesting, silvicultural and all our activities, in fact in the Nahmint Valley in this time in accordance with a current Nahmint Resource Plan. And I also recognize that after 15 years, it is time to review the current plan. In order to incorporate changes in environmental outlook, in public view, in expectations of the forest resource and in harvesting and silviculture methods and technology to be reflected in the new plan in other words all the latest and best we can offer as responsible forest managers of the 90's. To this extent I welcome and support the work of the taskforce. However, in closing I want to emphasize again that any deferral or moratorium that will reduce our current annual cut level in the Nahmint Valley will have very serious consequences on Sproat Lake Division's employment level and Sproat Lake Division's ability to continue to function as a viable operation. There is room, in fact, we are encouraged that logging opened up the Nahmint Valley and as we heard in earlier presentation that people recognize that because Nahmint Valley is now available to the general public that the visitations and the people are going to the Nahmint Valley increased many times as opposed to when there were no roads. The public use is much greater, therefore I accept and support there is an obligation on our part as managers of the forest, that we take the opportunities that are available in the Nahmint Valley to provide more opportunities for multiple use, for the enjoyment for the recreation for visual aesthetics and fisheries, wildlife, and whole host of things. So, I hope that in your deliberations you will come up with some sound recommendations in that area. However, again in closing I would like to emphasize that any deferral of significant volumes or tracts of timber or any moratorium that result in the reduction of current cut will have very serious consequences on the people of Sproat Lake Division and I would like to ask you to consider that in your deliberations and thank you very much for the opportunity to make this presentation.

Panel comment:
Thank you very much Mr. Jando. I think I will start with Mr. Reed this time. Do you have any questions?

Panel comment:
Tibor when you mentioned the deferral are you including in that the wildlife habitat, winter ranges or fisheries buffer strips?

Response:
No

Panel comment:
And do you find those acceptable?

Response:
They are acceptable, in fact we practice and I think that it should be part of the plan because they are very important without it there is no multiple use.

Panel comment:
Thank you.

Panel comment:
Rick.

Panel comment:
Thanks Tibor. You mentioned that one-third of your area of Sproat Lake Division was visually sensitive? Is that what you said?

Response:
Yes.

Panel comment:
What percentage of that is mature timber? Accessible mature timber.

Response:
Of the one-third these are perhaps the earliest logging areas around the Sproat Lake, I think that in that area perhaps of the 1/3 of the forest land base, about 15 to 20% is old growth, only. And there lies again the problem that basically we have no opportunity within our Division or elsewhere to replace any loss or significant loss in our cut from the Nahmint Valley.

Panel comment:
So if that is only 15 or 20% remaining that means the other cut earlier on in time.

Response:
Yes.

Panel comment:
Thank you.

Panel comment:
I have no specific questions, the only one I was thinking of has already been asked and answered. I do have a question, I am not even sure that it is a fair one under the circumstances, but yesterday in the field we had a few people advocate that there should be less grapple harvesting out there and we should go back to more towers, maybe longer reach systems. Do you have any thoughts about where we are heading generally?

Response:
Yes, yes I do. As a matter of fact we are examining and looking at that way and it is correct that particularly in the Nahmint, but other areas too, we are developing plans and doing research now to look at long yarding system. In fact, as a matter of fact, a machine that we are renting to experiment with, to address this problem, was brought into the division Friday and is going to be working close to the Nahmint next week for the next few months. We are renting this machine and we want to experiment with the long line systems that will enhance or help us to address soil erosion, stream side logging, and other problems.

Panel comment:
Good. And I am sure that you will give us, the Forest Service people the chance to observe the thing in operation.

Response:
Anybody!

Panel comment:
Ok, thank you very much. How about you Sandy?

Panel comment:
Thank you for your presentation, I don't have any particular questions Tibor.

Panel comment:
Tibor you didn't mention, but there was some criticism in other hearings about the keep out signs and everything else. Perhaps you could elaborate a little bit on the public access to your Division.

Response:
The public access, actually generally true to MacMillan Bloedel, but particularly to Sproat Lake we always emphasize that we like to make as much of our area as available to the

public as possible. Therefore, we have various signs, but the only area at Sproat Lake Division that was restricted is the immediate operating area where we need to on one hand, protect our equipment and people, our people do get nervous when hunters move in the area and what not, but actually more importantly to protect the public because in our immediate active areas there is a lot equipment and logs and other operating conditions that are not familiar to the general public and in fact put them in danger. The only areas at Sproat Lake Division where we don't allow the general public are the immediate operating areas. The Nahmint Valley is really opened year round probably any given time, 90% of the valley is available to anybody.

Panel comment:

OK thank you very much Tibor, appreciate that. I'll have to take a look at the schedule to see who our next presenter is. Our next presenter is Gerard Jansen. Just give us your name and your address, please Gerard.

Gerard Jansen
4859 Johnson Road
Port Alberni, BC

I am the MLA for the area. I have discussed the Nahmint Valley issue with a number of people in the community who are directly affected by this and have draw from that a conclusions that I am about to present to you. I will quickly read through it and try to answer your questions after wards. The harvesting of the Nahmint Valley a 36 kilometre long watershed covering 20,000 hectares has been a contentious issue in the land use plan for TFL 44 which itself encompasses 1.1 million acres. It is valued at approximately $40 billion and supplies economic benefits to the Alberni region. Due to the increased awareness of our environment, great care and caution must be taken in the harvesting process. I believe the harvesting of the Nahimint Valley can become a showcase of new environmentally sound logging systems. First the entire road system should be completed before any logging takes place. This would ensure that the harvesting could take place throughout the valley in accordance to weather conditions and life cycles of the species that live there. In the past progressive logging has taken place as roads continued up or down a valley at the expensive of all of the values. Secondly, if clearcut is the methods used for harvesting it should average 40 hectares and be interspaced by at least the same amount of old growth. Lakes, streams and rivers should have a leave strip left around them to protect the water course from siltation and provide shade for the marine life. It should also be noted that the large old-growth trees that are susceptible to being blown down in the leave strip should be removed. Harvesting methods should utilize cable systems and long-line rather than grapple yarders. This would allow for a minimum of road work. The road work should use excavators and involve no side-casting. All materials should be endhauled. Slope stability must not be compromised for harvesting. If the slope is too steep it should not have roads and either long line or heli-logging could be utilized. Snags and nesting sites must be identified so that our feathered friends are protected and have a chance to propogate. Recreation and wilderness sites should be established in all areas of the Nahmint Valley. That is wetland areas at the mouth of the Nahmint, where it enters the Alberni Canal, along the lake and the upper reaches of the river, and in the alpine areas. These should include mainly wilderness sites, but also more heavily utilized areas such as the delta and the lake. They should include latrines, garbage disposals, and picnic tables to accommodate longer stays. Logging should encompass view-scape harvesting, particularly around the lake so as to maximize recreational potential. Log booms be constructed and placed at both the inflow and outflow of the lake so as to minimize logging debris in the lake and in the river. Boating should be restricted to canoe, rubber raft, or cartop boats and a power limit placed on motors utilizing Nahmint Lake. There should be no powerboats on Gracie Lake. Boat launching facilities and adequate parking for cars and trailers should be provided at the north end of Nahmint Lake. Fire management should be incorporated in the management plan and remain on site with proper access to year round water sources. There should be no slash-burning. All fibre logs should be utilized, not just as species required in the processing plants operated by MacMillan Bloedel, alder, cedar waste along with sub-species should be offered to contractors and wood cutters. Economically, Alberni needs to harvest the Nahmint Valley. Forestry provides 80% of the economic opportunities for the Alberni region. Prior of the recession in 1982, MacMillan Bloedel, employed 6,100 people in the Alberni region. Presently MacMillan Bloedel employs approximately 4,000 people in four manufacturing facility and five logging divisions. The Nahmint harvest will be 121,000 to 124,000 cubic meters per year on a 80 year rotation cycle and will eventually harvest 9 to 9.5 million cubic meters in mature timber in the valley. At present some 19% of the valley has been harvested. This includes the 800 hectares logged by railed in 1930's and 1,657 hectares since 1975. The 40 year interval allowed the lower Nahmint to re-forest itself and it is hard to notice any evidence of logging that occurred in the 1930's. No fibre should be exported out of the Nahmint, or for that matter, out of TFL #44. All fibre should be processed in the Alberni region. The holder of the TFL under license from the province should ensure that the maximum amount of processing jobs occur in the Alberni region and out of the fibre harvested there. It is no longer acceptable to harvest public land for the profit motive alone. Competing values include not only recreation, wildlife, and ecology, but also the economy, and infrastructure of single-industry communities such as Alberni. If any restriction of harvesting is contemplated, both the company and the employees should be compensated. The time has passed when license holders were compensated for loss of fibre supply, while the workers were not. In conclusion, the process of dealing with land use conflicts on a valley by valley basis is a poor one. At present there are five land use decisions in process in TFL 44. Meares Island, the Carmanah Valley, Clayoquot Sound, Megin, and Nahmint. It is difficult for companies, to communities, and the general public to pass judgement on a valley by valley basis when one is not aware for what is about to occur in the next valley and its impact on the region. A comprehensive land-use plan for the central West Coast of Vancouver Island is a much more realistical alternative. Where from here? After the Forest Service has received input from the Nahmint Plan, it should be compiled and a further public meeting be held to allow for comment on the proposed plan before a final decision is made. I want to thank the Forest Service for the opportunity to present this submission and to thank local 1-85, Sproat Lake Division, the Forest Service, and the Nuu-Chal-Nulth Tribal Counsel, and individuals of the Alberni riding for the help in compiling statistics and information.

Panel comment:
Thank you very much for your presentation. I will start with Mr. Kokura. Do you have any questions for the presenter.

Panel comment:
I asked him all the questions in Victoria, already.

Panel comment:
I am exactly in the same boat, thank you very much Gerard.

Panel comment:
I have no specific questions except for one, real tough one. And that is that you suggest we should road the whole valley in relatively rapid in order to disperse the cut and to there by reduce the amount of progressive harvesting in the valley. How would you propose funding that accelerated road construction?

Response:
MacMillan Bloedel is a big company. I am sure they could come up with the funding for that and if they haven't got the money they will just have to lean on Noranda.

Panel comment:
Question answered. Rick.

Panel comment:
My question will probably have the same answer. You were talking about endhauling which is a very expensive way of road building. Who do you think should pay for the increased cost of the endhauling? Is it appraisals or through the company itself?

Response:
The company itself. I realize that logging is an expensive

method and that in return to the process of harvesting those trees has to be fairly immediate. However, we can see in other jurisdictions that there is already a shortage fibre supply in the world and that shortage is going to be more acute over the future. That will force the price of that fibre up I believe and when that occurs the additional costs will be absorbed in that increased price that will be realized for the fibre.

Panel comment:
So in the long run you figure that it will be alright.

Response:
A number of years ago, now that long ago 10 or 15 year ago, we were very surprised when pulp hit $400 a ton and now as you all know it has gone a well beyond that, it's had a thirty percent increase in the last number of years. So, and that is due mainly to a shortage of fibre supply. There will be a reduction I understand in the next number of years for a short period of time one to two years because of the number of new mills coming on stream throughout the world, but with the increase of economic activity when you look at the expansion of the eastern European economy over the next number of years, 1992 happening when the economic community comes together. The Asian markets growing very, very rapidly, number of those dollars being invested here, I think that you will see the absorption of that increased supply very quickly.

Panel comment:
Thank you. Dave do you have any comments?

Panel comment:
Gerard you suggested that there should be a further public meeting once the plan was drawn up. I don't know if you were here this morning, but there was a suggestion of a follow-up committee that would look at and review the implementation and they would meet four times a year and look at implementation. I just wondered what your thoughts were on that.

Response:
I agree with the follow-up committee. I think it should take place, there are a number of them in place, the Tsitika is one area that has been managed relatively well and as received appraised from various sectors throughout North America and what I would like to see before the plan is actually implemented, that the follow-up committee should first of all should follow the logging concepts that are being put in place there and they should identify I think, the follow-up committee, should go and look at an area before it is harvested and again survey it after, to make sure that each specific area that where the licenses are handed out are being followed by the plan. Also, but the public meeting should be held so that when plan is complete and the green light is

given so to speak for harvesting, the public has a chance to look at that before it is finally implemented.

Panel comment:
Your talking about the results of this review?

Response:
The results of this review, yes. Rather than the review being made and then the green light being given the go ahead and proceed with harvesting, let the public have a chance to look and comment on that before it is actually implemented.

Panel comment:
So, your recommendation is that this review team should come back to the public, perhaps in this very room with our report and our recommendations.

Response:
That is correct.

Panel comment:
Glad to hear that. Thank you. We have a few more presenters this afternoon, but just before we do that, Malcolm I received your note here and I think your idea is a good one. How about if you just read, come forward and read into the record your statement. Malcolm, for those who wasn't present this morning, made a very interesting presentation to us and I think he just wants to add one point of clarification.

Malcolm Robertson
Says, Ernie, this morning I named Dave Bishop as one person with whom I talked yesterday. Dave and I would like it a matter of public record that the suggestions and opinions that I offered this morning were not to be taken as Dave Bishops. How can we put this on record. Do you read it out or what, I'd be happy to go along with whatever you suggest. Malcolm.

Panel comment:
That is all that is needed. Thank you very much. I think our next presenter is Mr. Nick Boss if I am not mistaken.

Nick Boss
5668 Poplar Avenue
Port Alberni, BC

Well good afternoon gentlemen, I guess this is my third go at you. I'll briefer than last time, you have all the information that I gave you. I would like to introduce myself again. My name is Nick Boss, I've lived in the Alberni Valley since 1957. I've worked at Somass Mill, I've worked in Effingham Inlet, I've worked in Tsuciarte, Kingcome Inlet, Franklin River, Cameron, and I finally ended in up in Sproat Lake Division. I am currently the Divisional Chairman. I was vice-president of our local union between 1980 and 1990.

Now some of the things that I want to say probably don't pertain to the Nahmint, but they are more general statements. First of all that you have to keep in mind in any planning in particularly in the industry now a days, is that people are the most important resource. Not corporation, not government officials, but the working people. It is well known and those words don't come from me, they've been said by a lot more important people than myself. Realistically working people are the tax base of this country and a particular in Port Alberni if we were to lose more employment simply the tax burden on the people in Port Alberni, the city couldn't survive as it is today and certainly couldn't keep up Echo Center where we are meeting, etc. The matter of debates that have taken place in regard to the wood supply are really starting to surface as you are aware that the MacMillan Bloedel will be cutting approximately 300,000 less than they used to. The cut went down to 2.6 million meters rather than 2.9. It has already resulted in fifteen people losing employment at the Pat Carson Bulldozing . Fifteen people losing employment at Franklin River. There is, I believe, an equal number lost in Cameron Division and Somass Mill has faced great lay-off because there now seems to be perhaps a shortage of supply. Moreover because of the uncertainty of the TFL, MacMillan Bloedel may not invest more money. So rather than looking at maintaining employment or perhaps even creating more employment, we are sure in terms of employment in this area looking at a recession. So those things have very little to do with planning how to log Nahmint right, but that is about the circumstance we find ourselves in. This threat is even bigger for the Alberni Plywood Plan, if we are to lose more fibre out of this area, I guess the first plant that will go down will be the Alberni Plywood Division and again that Division has 280 employees, husbands, wives, women and children, so I must stress how important the issue of TFL is to our membership. Sproat Lake Division itself has 240 employees, wives and children, hourly employees. It has approximately thirty people on staff and in that case there are some husbands, wives and children. The employment for Sproat Lake in the Sproat Lake has a 25 year plan and employment should be stable for that division. However, in retrospect the percentage that was given to the small business cycle some time ago, has affected our Division like many other Divisions. Layed-off some people and simply moved employment to other people. The great political farce that the government made at the time that it was job creation was a farce. Simply, it cut back on the amount of timber M.B. was to log and was given to someone else and really it did not create employment for anyone simply some of our people in our divisions lost their jobs and I guess some other people for some small contractors were hired on. It did not create any jobs I just wanted to identify that to you. That is real life. It was a political farce. In planning Nahmint and I feel very strongly I heard Gerard talking about road construction, I equally feel that road construction is very important to the Division. I believe that a main-line should be built to service most of the wood in the Nahmint Valley itself. As you are aware, part of that is already in the planning stage. I do not believe, being an environmentalist myself, that all roads should not go in at same time for that specific reason. The more access roads you build the more pollution you have, the more runout you have, the more soil you destroy all at once and it certainly doesn't make any sense to make a super structure of roads when it is not necessary. In building that main line there should be kept in mind that there should be access to water, for fire protection and if there is to built any steep grade, which permanently scars the side hills, the ballast should not be pushed over the side and destroy an addition 200, 300, 400 feet below that cut. If there is to be any steep grade built the ballast should be trucked out and stored. I hope I am not boring you, chairman, I realize that I have said those things to you before.

Panel comment:
That is alright.

Response:
I am getting pretty loose here. I guess we're brothers before god.

Panel comment:
That's right.

Response:
The general public has been lead to believe that what we do in logging is simply cut the shit out of things, destroy it and leave it and you gentlemen know different. We talk in terms of clearcuts, but certainly in that area, let me backtrack. The general feeling that I've got from both sides is that the Nahmint area is going to be a model for logging; extremely happy to hear that and reviewed those comments and opens should be made so it is first of all not destructive to the general area and secondly it could be pleasing to the eye. There is really no sense to it to take a large section of timber out all at once. What we should do simply take smaller sections out allow a green-up period and then carry on. And a green-up period of course is a matter of more expertise. How tall we what the second growth to be before we go next to it. The matter of leave-strips is an old fashion idea that doesn't work, it has never worked, subsequently and with blow down it doesn't make any sense. Don't leave leave strips between timber blocks, log a block, leave a block so you have minimal blow down. Alternate logging methods could be looked at where the areas are sensitive the logs should not be, logging should not take place with the grapple-yarders. They do more damage than it you have a type of machine, we tend to call them long-line logging now a days, with machines that will elevate the wood right off the ground. In some cases it can be done with a grapple yarder, in a lot of cases it

cannot. so certainly in logging sensitive area in the Nahmint area. It should be kept in mind to use the appropriate machines for the appropriate area. In terms of rivers or the river I might add, and creeks surrounding it. Directional falling should be implemented around those creeks. If there is to be damage done to the creeks, some timber areas should be left. Now I am not advocating at all that you all of a sudden turn around and cut twenty percent off our timber supply. What we have to do realistically, if there is going to be damage to the creek, where we cannot log properly it should be left. Most cases that you'll find that if you employ a machine that will lift the wood up and over the creek, it should be relatively little damage or no damage at all. That's what we are looking for. In general the Nahmint area itself, although it is an attraction, the lake is famous for its steelhead run and particularly Nahmint Bay is very famous, I don't think you will find by next year that all of a sudden you are going to have 10,000 visitors to Nahmint Lake. We don't think there will be an increase. Some people, like myself and some of my fellow workers, do some fishing out in the lake but there is no great increase at all outside of your infamous Mr. Gillespie maybe there hasn't been a great influx of people to the lake. So in terms of a tourist pot itself, we don't see it competing with the Nahmint Bay itself. There is no competition when it comes to the big ones in terms of fishing. Gentlemen that is my presentation. If there is any questions I'd like to answer it.

Panel comment:
Thank you very much Nick and the fact that you have made a presentation to us previously it has made it less likely, I think, that we will have a lot of questions for you here. But Mr. Reed do you have any comments.

Panel comment:
I have no comment but thanks for your presentation.

Panel comment:
Just one point of clarification maybe on the five percent take back. Correct me if I am wrong and I am not trying to put you on the spot, but I think in the intent of the take back was that jobs would be created because it was going to be value-added to secondary manufacturing. In other words the primary logging, there may be lay offs in TFL 44, but those jobs will be created in primary logging some place else. However, those logs would then be taken through various stages of secondary manufacturing which supposedly would create more employment. Now whether that has happened or not, I don't know, but that was the intent.

Response:
It hasn't created one extra job so far and it is lost employment for people that had seniority in our divisions.

Panel comment:

Thanks.

Panel comment:

I think we covered this the last time you made a presentation, but I will clarify this one more time. You believe that, if I am not mistaken, you believe that the main line roads could be placed in the valley to allow dispersal of harvesting, but you're not in favour of building of any of the side roads until it is necessary. That is essentially right, is it?

Response:

Yes.

Panel comment:

Ok good. That is about the only question I have. Sandy do you have any comments or questions?

Panel comment:

No, just thank you again Nick.

Panel comment:

Nick there is an experience logger you mentioned that you would like to see a block taken out and a block left and no strips as such. You didn't attach a figure as to how large of cut blocks you'd like to see, there is other people that presented 30, 40 hectares and so on. What size of cut block would you like to see?

Response:

Well I think if you talk in terms of settings, if you take out a 2,000 foot setting and it depends again on the elevation and the steepness of the terrain, but if you take 2,000 feet of road frontage that should be a sufficient setting for logging. I don't know what it means in terms of hectares, I am sorry I am not the familiar with the term, but...

Panel comment:

Well thank you I really appreciate that Nick and I think our next presenter is Monty Mearns. I am pretty sure that Monty came in here, yeh.

Tape ends
Tape resumes

Mr. Monty Mearns
IWA - C
Local 1 - 85
Port Alberni

I am going to split the time in half, I am going to deal with our brief that you have or I hope that you still have. I want to highlight the brief again. I didn't read the brief last time. I believe that it is more meaningful if the committee, the ones that the brief was designated for, study the brief and I'll simply address it. You can't put what you want to say in writing sometimes and it tends to get to lengthy. My opening comments though, rumour has it that I was a logger and I still am or I pride myself that I am still and I am from the Division, Sproat Lake Division, and I am very familiar with the area and my opening comments want to say and I did neglect this in Victoria. That our local union has toured that area extensively plus again I have quite a bit of knowledge of the drainage and do a lot of fishing in there and with all due respect to the last presenter, the trout in Nahmint Lake are a heck of a lot more sporting than a salmon in Nahmint Bay. There is pretty nice fishing. My opening comment I am going to quote from the brief and I think it is pretty significant from where the IWA comes from. Simply, IWA Canada members in this province employed in the forest industry contribute heavily our collectively high standard of living and we wish not to be the pawns to political inefficiencies. Now that is a pretty big paint brush, but I think I just got the whole works of you with it and that is where we are coming from. For too many years we get caught in land use disputes, I say too many years, in the last few years we seem to be the pawns and it seems to matter not what we say or do, we are the people the lose in the long run, the working men and women in this province. Which lead this union in 1989 to develop a forest policy and our submission is based on our forest policy. The prior speaker spoke about alternate logging methods and road building practices, etc and yes those things are indeed found now in our forest policy. I want to state the MacMillan Bloedel in Sproat Lake Division has been harvesting there for some records the turn of the century. There has been old growth harvesting in what we know Sproat Lake Division for a long period of time. Perhaps the oldest logging operation, geographically, to date in history. There balance of fibre is about 50/50 and the Nahmint drainage obviously is including in that balance of old fibre. I want to repeat again today as stated in Victoria that there are groups and there are movements afoot in this province, be it the Nahmint drainage or any other drainage, that have developed understandings and ideas and plans that perhaps these drainages and valleys should be harvested and sustained on a valley by valley basis. In other words that the Nahmint be harvested on sustainable development as a valley, separate from the AAC of the Sproat Lake Division. I think that that's probably the most important issue that this organization has faced with in terms of how we go about doing our business as loggers, mill workers, etc. It does not bring us a whole lot of security if we are now going to have pieces of the old growth, whether they be large or small, withdrawn from AAC's and allow them to stand on their own sustainability. It's simply cannot happen. It would have a devastating effect to Sproat Lake Division because the balance of old growth is 50% to 50%. That division requires that AAC of the Nahmint Valley to sustain itself to be included in the Sproat Lake Division AAC. Again I am repeating myself, I made that statement to you in Victoria. However it will, I think, eventually become a very high profile issue. I don't for the wildest, my wildest imaginations or dreams, do I think that any public meetings or disputes are finished concerning the Nahmint drainage. There is a lot of people out there that want to put my brothers and sisters out of work. I want to state that Sproat Lake Division in 1981, '82, reduced their cut from 683,000 cubic meters to 490,000. It affected the job loss at that time. The licensee at that time stated that this would provide a longer term employment for the crew remaining. It balanced the cut that could sustain themselves with longevity. In fact, I believe and the union believes, that Sproat Lake Division meets that goal right now. That they are indeed meeting a sustained cut. I want to talk a little bit about the Nahmint study of 1975, and again I want to complain that the IWA was not part of it. A lot of people forget that the IWA have been around since 1937. We are probably the oldest organizations sitting in this hall today, we are a lot older than M.B. I don't want to take shots at anybody, but I want everybody to understand that we didn't just come off the turnip truck and we didn't just fall down with the rain. We would expect if there is any planning studies, committees, be monitoring planning, etc. we would insist to be part of it. We do represent the men and women that work in that operation and the converting plants that are affected by it. Nahmint study was a model of its time, there is no question. We have been through the study, we've looked at what it was attempting to do, for that drainage, and we feel that perhaps a lot of that study can be utilized in what is going on in the Clayoquot area. I think that we'll probably talk about that at a later date, but it was an excellent job. I was pleased to hear that management of the Division, in Victoria, state that in theory and in practice that they still were following those guidelines of that study. The study was amended in 1979 and 89 and for whatever reasons, I am not going to get into a public debate about the slide, but I feel that if the 75 study was followed there would be a slide on the side of the lake, that would have been endhauled there would have been no side casting. However, we learn from our mistakes and I would expect that the employer more than anybody is well aware of that issue. The prior speaker spoke about directional falling. We visited the operation a number of weeks ago and witnessed some pretty progressive logging practices out there. The guys were line falling with a grapple yarder and they were doing some pretty good stuff. Anything that was wind-firm was being left behind and those are the kind of practices we think that are going to have to be persued in that area. Again, ties in with the study. I want to touch on another issue, I believe it is no secret to IWA takes a strong position on jobs. It is also no secret that there is a whole lot of people out there that say that you take a strong position on jobs, but you don't take a strong position on automation and the big layoffs of the 1980's, well I want to set the records straight because I know the press is here. The reason there were lots of layoffs and a lot of unemployment in 1982, and '83, wasn't because of automation, it was because of high bloody interest rates. Was high interest rates and poor markets that put thousands of people out of work, not automation. It is no secret that the forest industries went from the oxen to steam to diesel to electronic power now. If they hadn't we wouldn't be sitting here today. Our competitors somewhere else would be. There wouldn't be an industry, there wouldn't be jobs. There wouldn't be an IWA. How much time have I got?

Panel comment:
Your getting there.

Response:
I want to split it in half!

Panel comment:
Your getting close about another minute or so, Monty.

Response:
Ok well I'll wrap my time up, I have opened with closing statement that we no longer wish to be pawns. I believe that, I haven't sit in to a whole lot of presentation, but what I have heard so far today, I must take the position of building the roads and making the infrastructure in place before harvesting. We in the IWA probably wouldn't support that concept neither as the prior speaker stated. It doesn't make a whole lot sense to us to go put a road network in and for what. You can log and put a road network in as you go, providing you follow a plan. I want to before I wrap up, I want to emphasize that we feel there should be a monitoring committee in place. One in which we do partake and we feel that the all user groups should partake as well. There is no question that forest industry is under the microscope in 1990, concerning the issues of environment. We think that being 1990 and the future will prevail that we are going to have to be more concerned about how we do our business as a logger. Public meetings before we harvest the Nahmint, I don't agree with that neither. There has been logging in the lower Nahmint area, and in the, lake area for a few years now. There is a plan in place for Nahmint for the logging practices from what I can gather don't look all that bad. We have some objections to some things that were done and we spoke to management about them. Albeit that is just our organization, perhaps there's a lot of people out there that don't have the availability to do that. But I don't think that the thing should be tied up for more meetings. I think it should be business as usual. However, I have to emphasize that 1975 plan should be followed and with that I'll let Earl address the rest of the ten minutes.

Panel comment:
Ok fine. Thank you very much Monty.

Earl Foxcroft
3771 Exton Street
Port Alberni

I'll be brief. My name is Foxcroft. I live at 3771 Exton, Port Alberni for better than 35 years. I am the president of local 1-85 and I am here to support the brief from the IWA as given to you by Monty Mearns. I want to break it down and just make four points and I want to look at the overall picture rather than just the Nahmint area and how that affects our employees or our members and the employees of MacMillan Bloedel. The employment levels and it's history as to what has happened in our position very clearly with MacMillan and with the government is that we will not stand for any further erosion of forest based jobs in this particular area. In order to maintain that and do that, then obviously we cannot allow for any erosion of the forest base itself because if you do that it ties in directly with employment in logging and through the converting operations. One of the problems that we have faced is the balance right across tree farm license 44 and there has to be a balance to cut cross the tree farm license. For a simply reason that there is logs that access easier so they're cheaper. They're easier to get to the converting plants because other areas that you need transportation through barging and you need cook house, bunk house to look after the employees and a more expensive operation, therefore more expensive wood. That has to be balanced over the years because markets will flutchuate up and down. Unfortunately in 1981, '82 the company chose before service allowed to move out of areas that shouldn't have been moved out of. As it relates to the Nahmint area, that is an important area for Sproat Lake, but it is also important to our converting plants. Very important to our plywood because of the fir that comes out of there, but also important to the APD and Somass. Important to the pulp mill as well because they pay for the residue, the chips, but also get some pulp out of there. Now the value added which has been the buzz-word where the future is which people are talking about. In order to have value added you have to have old growth timber. You have a look at second growth timber especially if it has been fertilized and what have you, and you haven't got the same tensile strength, nor do you have the same type of wood. With the old-growth and it is our understanding that the purpose of changing some of the converting plants was to develop a value-added to that wood. Well the way to do that of course is to follow what happened at Somass which you are familiar with Mike, and also it should be happening with the white-wood as well and we should be developing to the fullest extent that old growth timber to put into value-added. Based on an equitable cut across the piece over the years so that we have timber available to us and to this community in the future. I don't quite see that happening and when you start relating that to the Nahmint, to the Carmanah, to Meares, to the Clayoquot Sound area, when you start looking at the overall picture, I become quite concerned. Because there is people that would allow us to start cutting the second growth before it's time and leave the old growth there, which makes absolutely no sense as far as I am concerned. Yeh, I am an environmentalist myself, I believe in treating the forests as they should be treated, with respect. That we should be setting aside certain areas for good reason, but I see no good reason in my discussions with people from Sproat Lake, management from Sproat Lake, that are knowledgable as to why that should be set aside or should be treated any differently than a sensitive area. So it becomes a sensitive area. Now, one of the items that I was happy to see, Mr. Jando talk about was the matter of the fact that he has brought in long-line machine. The effect of long-line machines allows as Mr. Boss pointed out, log over top of standing timber, over top of streams without effecting that and also it means a lot less road building, so we are not disturbing the forests base and you are leaving more forests base there that's returned into hopefully good second growth. So my point is very simply are: employment, and this valley has had all of the reductions and forces within the forest industry that it can stand and stay aviable. All that you have to do is start looking at the problems in some other communities to understand what has to happen here. Obviously there has to be a balance in the cutting of the TFL, across the TFL, we have to work on value added and we should be looking at new logging methods, such as long line. Thank you.

Panel comment:
Thank you very much. Mike do you have any comments or questions?

Panel comment:
Yeh, I do. Monty, a couple of previous speakers spoke about, Gerard Janssen spoke about a road, entire road network in the Nahmint Valley and Nick in his presentation said that well he doesn't agree with all the secondary roads going in and he suggested that the main roads should go in. And I listened to that concept before and I kind of thought there seems to be valid reasons for putting the main road in. Now you stated that you're against building roads unless they are required, is that your own position or is that the position of the IWA?

Response:
No, I was re-iterating Mr. Boss's position. But if I can elaborate. We have visited the United States and we have witnessed how they log and until we're prepared on this coast to log similar, yes, I would agree put the road network in and I am talking about ridge top logging. I'm talking about putting road networks in on the top of mountains. I'm talking about long line yarding. I am talking about valleys that they yard across 6,000 and 10,000 feet. Now, I don't see that being applicable at Nahmint. The valley is pretty broad, and I am not so sure you could even develop road to do that kind of logging and I don't really know what that notion of a road

network means. I don't believe that the secondary road should go in. The main-lines of course, yeh they can be developed that is obviously employment that is planned on that for the road building crews. But a true secondary road network, if you are talking about long line yarding and new forestry practices, you're talking major road building and you're talking right on the top of mountains and I don't think we're quite there yet and I am trying to differanate from that Mike. But, yes, I would support the concept of the main-line road being in, yep.

Panel comment:
Thank you.

Panel comment:
I have no questions, Monty. Rick do you have and questions?

Panel comment:
Just one point for Monty at this time. For long line logging, correct me if I am wrong, but you don't have to have a road on the top of the area can you not put in helicopter sites and drilling.

Response:
Yep. Of course you can. Obviously, if you have, it is a heck of easier if you have a road network on top because your equipment is mobile. There is long line yarding and being developed now, on the north end of the island, the hard way and I call it the hard way, the guys climb out and they walk out and they plant dead men in and they go about business. It is just a little more difficult that is all. But yes it can be done. If you have a road network and it has to fit the terrain, the terrain that we had saw this practice done in the States is much different than here. The valleys are not quite as big, not quite as steep and it works fine for them. Now that practice can only be developed where the terrain fits. In the Wass Camp, in the Nimpkish Valley, there are some ideal locations for that practice and they'll soon be developing it. It is in experiment stages now.

Panel comment:
Thank for all that Monty.

Response:
There is one point I wanted to make about the five percent that you asked the last speaker. The five percent has created not job one in the Alberni Valley for us. The five percent take back all that it is, it is like a dime with a string on it. We lost fifty-seven jobs in Gold River Division and two contract crews that won't be working there next year. And do you know why? Because somebody there in stupid wisdom decided to take five percent away. They have now decided to including helicopter logging as a feasible logging method. They are going to import those logs from there, lay off fifty-seven loggers in Gold River, bring the logs down to Alberni and put them in a saw mill here. Now does that make sense to you?

The five percent does nothing but take jobs from one group of people and create jobs somewhere else and by in large that the jobs are not union jobs and I should repeat it wasn't five percent, Mr. Foxcroft has showed me, it is ten. So the five percent was nothing but a hokey scam, a two bit political scheme. I do nothing more than a pay off for somebodies friends as far as I we're concerned.

Panel comment:
Thank you Monty.

Response:
Five percent came off when Fletcher Challenge bought B.C.F.P.

Panel comment:
That's right and another five percent came back under the bill in the legislature for the valued added small business. I agree. Dave do you have any comments or questions?

Panel comment:
I have no questions.

Panel comment:
Thank you very much you guys. And our next presenter is Mr. Jack McLeman. Thanks Jack.

Jack McLeman
Port Alberni
Site 127 c-31 RR #1

First of all I would like to say thanks again for an opportunity to talk to you and I would also like to congratulate you in getting a speakers list this time. It is kind of a bit different the last two towns we were in. Also I don't have to drive so far today, I appreciate that too.

Like I say in my brief I just handed to you, I am not going to go over again in detail what I said at the two previous meetings in Nanaimo and Victoria. I have written here I would however like to repeat my opinion of the recreation facilities that which ever kind you decide on should not be in perpetuity but on 75 to 100 year cycle, except of course for the alpine areas around Mount Klitsa and Mount Nahmint. Also I would like to make a comment based on one of the speakers here today. I believe he said that he wanted concrete boating launches into the Nahmint Lake. No thank you, we do not need another Sproat Lake out there and I don't think it would be good for the environment for jobs or for any of us who just want some peace and quiet once in a while. I didn't identify myself, I am sorry. I am Jack McLeman and I work for the Somass Sawmill, I am not a logger. But I am one of those people that for about the last four or five speakers have talked about that was layed off in the 1980's. I was on UIC and I was on welfare. I didn't appreciate it. I did appreciate the help I got from one individual, particularly in the valley, who taught me how to weld and start a little business. I didn't make any money, but I did get back at the mill and that is why I am still in the valley. A lot of the people that were layed off, like I was, aren't around anymore and I don't know where they are or what they're doing. Hopefully they are working somewhere. As I stated before I work at the Somass Division and we can face some more layoffs there right now. You heard about them from other speakers, you have heard about them from me in the last two meetings. If we don't get the fibre and don't use the fibre that we get. The first argument I guess is the first thing that I am concerned about today is that we get the fibre. I would like to make a request to the Ministry of Forests is that you ensure that the logging companies, not just M & B, but a small contractors and everybody that logging the Nahmint and other areas of the TFL around our area, process that wood in the Alberni Clayoquot Sound area. We stand to loose up to 150 jobs or more at Somass, all of the Plywoods. We have already lost several permanent jobs that you have heard about in logging and that is just like in the last couple of weeks and it is just not acceptable to me. We have been through enough of these downturns and we can't afford anymore. We also should not have to watch all those logging trucks going over the hump, fully loaded, with all the species we use in the valley. It is also not acceptable, it is not acceptable for jobs. I don't think it creates a lot of jobs else where and I to have a comment to make about this five percent of the small business. It seems like it has taken off of the major companies and the excuse given for what I have to agree must have been a political decision, probably for some friends maybe not; cause I don't know enough about it. Excuse given was to facilitate the remanufacture the fibre and the value added in right down to the finest of finished products. I don't see that happening anywhere, maybe as one of you people knows where it's happening. I haven't heard of it happening, I am even nervous about the mill that is going in here that Coulson's is putting in. The plans that I have seen of that so far I don't see a lot of real value added wood coming out of there either. And they have some of those five percents. I'd like to make a request to the Forests Ministry and if the majors, i.e. M.B. etc, put in the facilities to value-add right down to the smallest pieces of wood. Why take the five percent off them? Why not make it as a, let them put in the value add and let them have the wood. We've got the jobs, we've got the facilities, why should we loose them? Why don't we make it as a recommendation or even a condition of logging that they process the fibre right down to, like we are at Somass right now, and planning and hopefully to put in some more equipment to get smaller pieces down to even 10 inches that we can use. I have been working, as I have mentioned before, this last summer on a so called taskforce at our mill with management and union. I am on the union side and I am not suppose to say side anymore but there it comes. And we have made proposals already to remake our log factory area, so that it is complete isolated, so to speak, from the canal, then nothing will be going back into the canal at all. Some of the ideas we've come up with could even be incorporated if they work, and I believe they will, in the pulp mill as we try them out and we are not going to get money for that, if we loose fibre. We've also got proposals to add to and to change equipment and like I have already said using pieces as small as ten inches and we are already doing some of that in fingerjoining, but there are other things in Somass that we could be doing. If we don't get the cedar we need to run from the entire TFL and surrounding areas, we won't be able to convince our company to invest the money and the job losses will just keep climbing. They're already starting, we started in the 80's, we loss the 700 at Somass and so many hundred here and there and everywhere and it is just not acceptable. It can't happen. I would also like to talk to address the Ministry of Forests and other Ministry of Government there. That when you are talking about taking the fibre out of our area for whatever reason, it has already been mentioned, compensation to workers. Well, Frank Bebin got compensation to workers, what did they get an extra week's severance. Something like that, when they got kicked out of Meares Island for whatever reasons, political only as far as I am concerned. We're not interested in another weeks severance pay. It doesn't buy too many groceries. If you worked for a life time now from the time your 20 until your 55 or 65, you'll probably make about a million dollars in the wood industry. We're looking for a million dollars of worker. That's a lot of bucks, it is going to cost a lot of money to take it. I guess I should say thanks to our next speaker, before she gets here. Its a comment she made in this room about three years ago that got me off my fat duff and got out of this fight looking for jobs. I appreciate it I guess or maybe I don't like my blood pressure being quite so high, I am not sure yet which it is. I would like to make just one comment that isn't in my report or brief and that is these follow-up committee. I believe that there should be a community based one. I don't believe we should stop and have another study after the report comes in, let's get on with business, but a community based follow up board, committee, taskforce or whatever the buzz word is over the weekend. Call it form to the IWA industry, the City of Port Alberni, Ucluelet, Tofino, I guess I've got to include them, I don't know why and any other group that needs one representative but it would have to be, their decisions would have to be done on a majority vote not like they have that Alberni-Clayoquot Task Force. It is obviously not working and costs us jobs already. And that is really all I have to say and please don't put us out of work. Thank you.

Panel comment:

Thank you very much Jack. A lot of the policies that you've just described there are dealt with at the political level in our society. You're talking to the servants of the people that get elected in B.C. and we sometimes share the pain right with you. Sometimes we don't even get that one week's severance.

Response:
I realize that, I have already talked to your boss the other day. He even says he wants to come and talk to me.

Panel comment:
OK, thank you very much though, for your presentation. Mike do want to ask any questions?

Panel comment:
No, I just want to make a comment that I am glad to hear that your the only one that really clarified that when the make-up of the follow up committee is made up that the decisions of the committee be by a majority vote rather than like in census and I appreciate listening to that.

Panel comment:
Sandy.

Panel comment:
No further comments at all except to say thank you very much Jack.

Panel comment:
I've got no specific question but I do have a point that you mentioned that the Forest Service should ensure that wood processed in this area or logged in the area be processed in this area. The, and I stand to be corrected here, but I think that there is a process in place where that kind of influence can be made on the company and it is through the Management and Working Plan of the Tree Farm License. I don't know if you could make a law or whether the government would be willing to make law, along those lines or whether that would wise, but I think the management and working plan of the company which broadly lays out the strategy for utilizing the fibre that connected with that license. Is going to be watched very closely by the workers in the tree farm license and also by the general public. So, it's possible that that opportunity to exert your own influence on what happens to the wood logged in this area is literally right before you now, you in the next few weeks and months. So you might want to pay particular attention to that when the Management Working Plan next comes around for public viewing which should be very soon. Rick.

Panel comment:
No comment thanks for a heartfelt presentation though.

Response:
Thank you.

Panel comment:
Jack could you elaborate a bit on that 75 year rotation on.

Response:
Ok, I actually mentioned that in Victoria but what I would like to see is a section set aside for parks as a cost of doing business, logging, the company can do that they've seen lots of excellent ones in old growth and second growth and in logged off areas that different forest companies have put in. I enjoy staying at them with my family when my boys were growing up and that is fine. Set them aside for 75 to 100 years, but those then have another spot that's growing up and you've got a 100 year old tree that's not too shabby and it's not a bad place and then you can go and log that section, but don't take things out forever which is what happened in the Nahmint Valley when some politician drew a line that didn't make any sense in my opinion. I am not critising you guys. I know you didn't draw it, but that is what I meaning.

Panel comment:
You mean Carmanah Valley.

Response:
What did I say.

Panel comment:
Nahmint Valley

Response:
I apologize, I meant Carmanah. Do draw lines in the Nahmint, No.

Panel comment:
What about those recreation sites that are associated with special features of the landscape like a beach resort for example or a beach on the lake or perhaps a waterfall. You wouldn't move those, I guess you'd leave those in perpetuity.

Response:
Yeh, if you've got a beach and it's the only beach there, yeh your not going to and I don't, you've already heard the word, not planning on logging right down to the lake and so on. Leaving these buffer strips and whatever and alpine regions you can't change a mountain around, it is going to stay there, but there is not marketable timber on them anyways. So, like on the top of Mount Klitsa and the glaciers, you're not going to log anyhow.

Panel comment:
Ok, no further questions. Thank you very much Jack and our next presenter is Judith.

Judith Hutchison
Box 1087
Port Alberni

Good afternoon, my name is Judith Hutchison. I am here to represent myself as a private citizen and also the Alberni Environmental Coalition and we haven't got anything for you on paper at the moment, but you will be getting a submission on paper by your deadline. To start with....

Panel comment:
Just before you start can I have your mailing address, so that I can, I often have trouble contacting you guys.

Response:
Box 1087. 1-0-8-7, Port Alberni

Panel comment:
I gotcha.

Response:
V9Y 7L9

Panel comment:
Right.

Response:
I'd like to talk about the process as well as the plans them selves for the Nahmint and one point to get out of the way, right away, is the timing. It might not seem like too big a point, but it still is important that this is part of a two day procedure. There was the trip out into the Nahmint yesterday and now this today and I think maybe a lot people in the community have found it hard with the Fall Fair on. For the Coalition itself we had to be in Nanaimo yesterday because there was a round-table hearing which were very concerned with and then in Parksville and we had committed long ago to the Fall Fair and to have to be in three places on the same day, all of the issues as important, is difficult just for the colition and I am sure some people who aren't part of our group would have like to go out to Nahmint, but maybe their kids wanted to go to the Fall Fair and so the timing, if you have this kind of thing again as I think you probably will, if you could look at that more carefully I think the community would appreciate it.

Panel comment:
Yep.

Response:
And then secondly the composition of this review team itself. We've heard some people talking about a follow-up kind of watchdog in thing, but we would like to talk about just this group itself. We're not satisfied with the composition. We think it's weighed unfairly in terms of the big industry user, M & B. We think all the resource users should be represented

or none and when M & B, who is so big and so powerful, is on the review committee and none of the other resource user are, it at least looks like and may infact actually be that, the other values are given full consideration. We wonder why for instance, labour isn't up there with you? The native peoples, they certainly had a livelihood in Nahmint, historically, and the whole land claim question for the future. You know, we think there should be some native people sitting up there with you. The tourism aspect is a huge one as far what kind of tourism and how it is put in and how it's integraded with everything else. Another big question, we don't see anybody there from the tourism end of things and then the whole questions of the ecology it's is the adequately represented and so we would request that all the resource users be represented adequately so that there is a semblance of fairness. And then finally the terms of reference. If you had a fuller composition or a more fair composition, then we would also want your terms of reference to be expanded so that you could be more effective. For instance, the logging that is presently going on is based on a cutting permit that didn't really have any review process, any kind of public input that we were talking today and if things are happening out there, logging is going on which would perhaps preclude some decisions you might want to make. Then that would be unfortunate so we think that the whole thing, everything that could happen in Nahmint, should be part of your purview. With nothing pre-judged. Then actually talk about what to do in the Nahmint itself. We think that one of the first things we need is a proper inventory because the coalition itself finds that we just can't spell out for you, right now, a-b-c-d this is exactly what we would like. We don't know sometimes what we'd like because we just don't have all the information we feel is necessary to make the best decision. When we talk about a proper inventory there is two perspectives to take on it, just within the watershed itself. We want to know that all the values have been identified. The last time we were involved in a process like this, we were looking at the Carmanah and the only inventory that we had to look at was the companies' inventory and of course we found that there was just so much that wasn't part of it and when we went to the Forest Service, we were told that, by law, the only thing they really had to look at was, counting the deer pellets looking at the deer and then of course there was that Jet-Ranger helicopter which didn't really do to much to identify a lot of the wildlife that was there. We had all kinds of concerns about some species and we were told that well we just don't have to look at those. It is not part of the process and so we would really like to be really sure that the inventory there really has looked at all the forestry values as well as the timber and we're not even sure if the timber itself has been adequately inventoried and some of the species that live in those trees, I understand that those research platforms that the Western Canada group has got up, have identified all sorts of little things that nobody knew existed. They are not big things like deer, but they are very important little invertebrates and so on and they probably have come up with quite a few new species that we weren't even aware of and we start doing all sorts of things with that old growth in the Nahmint and we find out that we've maybe denigrated something that we didn't even know existed. Then this process hasn't given us full value so the inventory itself is really important in that valley. And then secondly, to look at the valley in terms of all of the island, we've heard so many different reports about how much old growth is left. In this TFL or on the island or in the province and what was included in the cut is perhaps not economic because of the costs of getting it or perhaps it was included in the cut and now it is going to be set aside for old growth values and so how much is there really left and how much have we got to work with. All these kinds of questions, we're concerned that we don't start cutting before we have some of this information as a base and I would even expand it then from there to say that once we have this information, we have a complete inventory of all the values and all the trees and then we want to talk about logging. I already said the terms of reference can include other values besides logging, but even when we talk about the logging that for the environmental coalition it is just as important to talk about how it is logged as where it is logged. We find in the past that the question has perhaps gotten confused when we are always concentrating on where, so that we end up with saying, "Here you can perserve this and we will try and keep this prestine and then here you can wack the heck out of this, just clearcut this." You know this is for industry and this is for the tourist or this is for the industry and this is for the animals and we think that is a wrong way of looking at the forest or a wrong way of looking at the economy, so we would like to see, if there is logging in the Nahmint watershed, and we say if, because we don't want to prejudge, but if there is logging that it be done according to much more environmentally sound methods then we have seen in the past. The phrase is new forestry, I am sure a lot of people in the room are familiar with some of the concepts of new forestry. We would like to see if there is logging in the Nahmint that it be a real showcase for a whole new way of doing business. One of the previous speakers said he would favour business as usual in the Nahmint and we would not like to see business as usual. When I just look at the table and I see that there is the styrofoam cup, I know it is not your fault, you know that you happen to be drinking from it, but just that your forced into that choice of using a styrofoam cup because you want to drink coffee and these little individual containers of juice, the way the paper is treated and what happens in the land fill there and the paper on the table, I'll betcha, wasn't from a recycled source and we all got here in vehicles and we contributed to the green house affect and so on that when we talk about what's happening in the Nahmint and our plan for it that we really have to look at something much more fundamental than perhaps the terms of reference that this committee has given itself. That the world has got to change the whole way it runs it's business. Or we are just not going to survive as a species as an economy, as a planet and so when I talk about inventory of the forest I am talking about something really important and it is easy to say down in Brazil somewhere they should change something or over there they should change something, but all these changes are all interconnected and they are all important so we can't have business as usual down there because business as usual is going to bring this town, this planet to a grinding halt. It is all interconnected. For instance if the mill could be reconverted to handle recycling processes, that would take some of the pressure off some of those trees because we know that there is a recession coming. We talk about standard of living, we know there is a recession coming because we cannot cut every single old-growth tree the way they were originally slated that it was all going to be liquidated. And we know that the second growth isn't going come on-stream well enough to take up the slack so there's that gap. And so if we just carry on in the Nahmint the way we have been going, we're not really going to do any service to the community or to the forests so we just can't have business as usual down there. If we are going to log in there we've got to do it in a whole different way and so we would like to stress that along with broader terms of reference that when we get down to logging that we talk about all the new forestry methods. We'd like to see for instance, no clearcuts. We'd like to see the trees taken on a selective basis and of course that doesn't mean select the best. Were thinking the way we see in Sweden where they take the worst and they do a culling process so that they are actually increasing the value of the forest that's standing, so that 20 years from now it is more valuable rather than farming for fibre which in the future is going to be less valuable. We don't want to see the clearcut plantation model. We think that although it is very likely that some old growth is going to be set aside as a preserve, whatever the size and where ever the location. That if something is logged that the logged forests shouldn't look that different from the preserved forest. That you could leave, just some of the tenets of the new forestry, for instance, leave a lot of those green trees standing. Leave them live. You can come back and get them in another pass, with different rotation schedules or for seeds or whatever. Leave snags, leave those fallen trees the big ones on the ground that hold all that moisture. Think about fragmentation because when you have these huge cuts there's all the problems on the slopes and with the soil and so on, but if you start talking about little patches then you get the problem of fragmentation and what happens to the wildlife that are trying to live in a forest and although you may total it all up and come out with a big number for the acutal animals trying to make a living in that forests when they've got that many perimeters around them, they really end-up not much real forest but you get corridors going between perserves and active logging areas and as I said so that you may, rather than go for the clearcut and the plantation, that you go for something that really is integrated. That the industrial forests be integrated with the preserved forest and the tourists forests and the habitat. Let it all go together and that's going to take maybe a lot more planning than the plans from the 70's has given us. And of course, I would just like to reiterate, that...

Tape Ends

Tape resumes after short interval...

Nick said a lot of people out there want to put my brothers and sisters out of work. I might be just getting too defensive but I think he was probably referring to some people come from the environmental perspective or environmental groups and I would like to make it very clear that it has never been the intention of any environmental group that we know of, certainly not the coalition, to put any IWA or CPU person out of work and far from it, we think that proper forestry, new forestry, proper planning the way I was talking about, would actually enhance the economy. It would actually give us more jobs. Not just jobs now that would costs the future but jobs for our children. We support logging jobs, we support logging as a matter of fact, but not if it is going to cost the earth and not if it is going to cost logging jobs that really belong to our children. You made the comment that for instance, endhauling is expensive when you put in a road. Well if you don't do that it is also expensive. It is just a matter of where is the expense and who pays it. Now if you don't endhaul, you have created a terrific cost, but maybe the earth bore that cost, maybe the jobs that are lost in future because the forest wasn't maintained as it should have been, then our children are paying that cost. So sometimes maybe we should pay some of the cost so that we don't ask our children to bear something that is actually unbearable. We think that a new forestry, new planning would actually give this town a buffer against the coming recession from the fall down and we would like to stress that it can happen. I think maybe because this change is so fundamental some of us think well it is just easier to go along as we have been because we don't have to face the crunch, but the crunch will come and if we actually take the Nahmint and use it as a starting point for a new kind of forestry then we can have a tourism economy much expanded than the one we have now. We can have logging jobs, we can have wilderness, but it takes proper planning so we've got to get all the resource users there. We've got to get the terms of reference to include all that. We've got to take a really deep and fundamental look and make sure that what we do actually is for the best and thank you.

Panel comment:
Thank you very much Judith appreciate it. I guess we will start with Dave this time. Dave do you have any questions to ask Judith?

Panel comment:
I have no questions.

Panel comment:
How about you Rick?

Panel comment:

Judith you covered a significant amount of ground. I found it very interesting. With the inventories that you are asking for and the extent of them, are you asking for moratorium or stop in logging while those inventories are done?

Response:

I don't want to use that word because it is such a, it is the kind of word that people would start bashing around and saying you are after our jobs and all that. When I talk about inventory, it is an ongoing thing. Obviously you cannot study everything because we are a very ignorant population in terms of the forest. We are only now beginning to find out what there is there and if we ask that we've got to know everything well, you can't know everything, but we've got to know a lot more before we proceed and we've got to proceed in such a way that we don't foreclose on some of those options. That's why I was saying that a kind of logging where the industrial forest is looking a lot more like the old forest. So that you still can go in and do some scientific research you know.

Panel comment:

OK, I understand what you are getting at there, but then does there have to be a slow down? I am wondering how we phase in this, this biological look at things that you are getting at.

Response:

Well maybe if you expanded your membership to include the other people that, the tourism people and wilderness, native and so on, maybe you could come to some kind of conclusion about that.

Panel comment:

Ok, thank you.

Panel comment:

I've got a couple questions. First a point of clarification and explanation maybe and perhaps an apology. The process that lead us to go out to Nahmint yesterday was essentially a spur of the moment thing that in the course of planning these open house session we came to the point where we were trying to figure out exactly how we could take photographs so that a person who had never been to Nahmint could get some appreciation for the valley, a sense of it's wholeness and some sense of context in which to make some judgements. Somebody at the meeting, some member of the team I can't recall, who said boy I wish we could somehow get people out on the ground with us. So we began to kick that idea around. In fact I think Sandy was the person who if I am not mistaken. We began to kick that idea around and out of it came yesterday's effort to get some people to visit the valley and really appreciate the fact that Maureen was able to be there and a few other people and I think that we will try similar methods like that in the future. But in the course of planning this whole series of sessions of public open houses and not interfering with the long weekend, we have to make some scheduling decisions and it wasn't until we got really close to the September 8, that I discovered that I had scheduled the Nahmint for the same day as the Fall Fair and more the pity for the opening day of deer season which means was the first opening day I've missed since I was about seventeen. Not that I always get anything, so I wasn't really thinking ahead and I apologize for that. So that's not so much a question as a point to clarification, but I do need your thoughts on this and I'd appreciate hearing them or getting them in writing if you can't give them to me today. You know that there are large planning groups working in the province right now in a variety of land use concerns. The Clayoquot Sound Sustainable Development Taskforce is an example. The Western Strathcona Taskforce is another and while these people are labouring mightily and I personally, and I mean this sincerely, have my fingers crossed that out of these efforts will come something in the way of a process that people can begin to trust. It seems that there still much hard work to be done and we run into a conundrum an unanswerable problem all the time in coming to terms with how do we bring people from among various interest groups to the table to discuss what we think is a common problem that they each have their perspective on and without inviting simply chaos and essentially an unmanageable situation. Where nobody is prepared to get down to talking about what we came to talk about where instead people talk about working out strategies to prevent other groups from getting there point of view across and there is a tremendous amount of in fighting. Now, what we would like to hear from people is there must be a process. There must be a way. For example, your group, your particular group, would be willing to work in the terms of a follow-up committee or a steering committee, or an advisory committee where you really have a sense that your really empowered to have some sense of direction, but at the same time you feel or there is a responsibility on you to adhere to the basic principle that we are all there on that group to work towards and not merely to subvert that principle in some way. It doesn't matter whether it is forestry out land use planning or hospital planning, whatever, the process in our society has tended to be that we elect representives and we tell them go and make those decisions if we are not happy, you're out of there. And so that representive kind of process can sometimes end up with a bunch of bureaucrats representing essentially the will of an elected government attempting to make decisions. I would like to hear your viewpoint. If you have something now, fine, if not in your presentation in September, try to present us with your idea of workable solution to that. Even if it is not perfect.

Response:
A planning process you mean.

Panel comment:

A process by which people from various view points, various stake holders, various interests can be encouraged to work together instead of simply to getting involved in a some kind of tag-team wrestling match with one another.

Response:

Yeh, I think maybe what we were doing on Saturday with the round table discussions was working on that very thing that the whole idea of the United Nations Bruntland report talking about how your economy and your environment have got to start working together and how do you take in start bring it around and the idea of a round table where you get all the players there is something that we are working on, but as far as the community trusting the process when you see only M & B on the review team, you have to wonder is everybody involved in the same game. Are all the values represented like when you say everybody should get together at the same table and not work across purposes, well then you have to even identify what's your goal and if your only goal is get as much out as fast as you can then it is not going to work and maybe M & B would say that is not our goal to get as much timber out as fast as we can, but when you don't have all the different groups even on the review team, you have to wonder well how can all the values be looked at if there is only representative from one resource group reviewing. So I would say "yes" the group, we are ongoing looking at how we can get this kind of movement. We were down talking to the Regional District about this kind of thing, but just here we would say your membership on the committee and your terms of reference is to starting ideas that would take you along way while we work out the rest of it.

Panel comment:

Ok, thank you Judith. I realize that it is a difficult problem. You also mentioned no clearcuts and then in shortly after mentioned Sweden. Now I personally have never visited Sweden, but I have seen various slide presentation on Swedish forestry and it seems to me that clearcutting is a very evident practice in Sweden but it is true they do a great deal of tending of their stands before they come to the final clearcut. There are various selections harvests in the process, but much of the trees in Sweden lend themselves essentially to clearcutting and there is even some substaintial clearcuts in Sweden, I am told. Now there may be others present who could either challenge that, but I understand that's the situation. That doesn't make no judgement I just simply, sometimes people thing they don't clearcut in Sweden and my understanding is that they do.

Response:

Can I respond.

Panel comment:

Yes.

Response:
I mentioned Sweden in terms of the selective process. As far as the clearcuts, yes it's one of those words that you know that how big are clearcuts and so on. They clearcut in Sweden, but their blocks are much much smaller, but we didn't want to suggest well just cut smaller blocks because then you get into the fragmentation thing, but I was just saying that when we say selective we don't go in, we don't mean go in and select the biggest or the best first we were talking about if you actually sort of have a culling process, you are building the value by the trees that you leave.

Panel comment:
I understand. Sandy?

Panel comment:
Just to say Judith thank you very much for a very insightful and wide ranging presentation.

Response:
Your welcome.

Panel comment:
Thank you.

Panel comment:
I've got a couple of questions Judith. What do you consider old growth? Since I have got on this committee I keep hearing this word old growth, old growth. What do you consider old growth?

Response:
Well of course it depends on the kind of tree, you know, but there are some trees that it is not the size anyway because some trees are only this big and it took them you know, 1000 years to get that way, but I would say, I probably shouldn't say because I will get called on it later, but I would say 200 to 300 years.

Panel comment:
It is not a trick question. I just want know.

Response:
Oh, no

Panel comment:
We're just recording everything you say, that's all.

Response:
I would say something over 200 years.

Panel comment:
To me it has been a real learning process getting on the

committee and I hear the whole entire spectrum from don't log anything to log as usual. And it is interesting when people talk about old growth. I think that if all old growth was to be put into a moratorium. Then I think a group like yours should come up with an answer as well than what do we do with the rest of the people that are going to be unemployed. Like a lot of people that seem to be talking about moratoriums their either on the public purse or their earning their livelihood out of the tax dollars that the primary individual is earning and when I'm accosted by some of the people that, what happens to me, what happens to like the taxes don't stop, you know, you have to pay property tax, the guy in the grocery store doesn't give you free groceries or anything. If there was a moratorium on Nahmint what is your answer to the 240 people immediately in Sproat Lake and couple of hundred people in Somass and the people in the Plywood and that. How do we accommodate these people?

Response:
Right. That's the $64,000 question, that's what it is all about. I think that a lot people realize that we can't go on as we are and yet nobody knows how to stop and start doing something else that we've made mills that don't take the wood and make that many jobs with it. Actually we've taken the wood and created fewer jobs with it because of automation so we get a bigger mill and a bigger mill and a bigger mill and it needs more and more and more of a volume to keep itself running, but because of the size of the machine and so on and the operation out in the woods you actually have fewer and fewer people. So the process right now, is actually we are loosing employment on the road we're running. So how do we stop that?

Panel comment:
Ok but. The present situation is that the and everybody knows that it has been repeated over, over and I guess Ernie is in the Forestry is in a better position to verify this but the TFL 44 had somewhere's around 3 million cubic meters taken out of it but the prognosis for the future is 2,600,000 in the next little while and then there seems to be a reduction as far as unibtelligible work so the fibre is being taken out. It is not bigger mills and so on. It's just the fibre is reduced and what I am really interested in, in recent reading we just addressing although there broader question is quite appropriate, but we should be addressing Nahmint, but if your request are taken to hold Nahmint in a moratorium while we're counting the invertebrates and everything else, what happens to the people this winter?

Response:
Well, there are three things we can do right away, but I don't know if can get them in place like tomorrow. But what we have to do is, like this is what I said before, that whatever we do in the Nahmint has to be part of a larger package that first of all, whatever we do with the wood that we don't ship it out raw or can't it and ship out that we. The wood that

we do get, we get a lot more jobs out of it. Make a lot more things from it, you know, make pianos and so on and so on. Now if you are asking me can we set up another factory in town in the next couple weeks so that we can start turning out violins and pianos and furniture and so on. Well I don't know. If I can manage that time line, but that is the kind of thing we have to do to get more of those kinds of jobs from the wood that we have cut. And then another thing we can do is start recycling. Start taking the wood that we have already cut once and using it again and again so we don't have to go out and get some others. And then the third thing we can start doing a lot more silviculture and reclamation of degraded lands. So those are three ideas, yes, we need to start doing this right now, but we need some leadership so that we can start doing it as soon as possible. I'd like to start doing it by this winter, but I really don't know if the people in leadership that can say alright here it is going to happen this winter, but more silviculture more value added kinds of manufacturing, more recycling of wood fibre. Those are three things that will help in the crunch.

Panel comment:

My final question to you is, I believe you mentioned selection logging. And I keep hearing about this and I am going to go down there and have a look about this farm around Nanaimo where they are selective logging. But I understand that, that's some fairly good flat ground. How do you selective log on steep mountainsides?

Response:

Yeh, I'm reading right now to try and find out just that very thing. Some people say that if it gets too steep, if the soil is too unstable, you shouldn't because then it is a danger to the faller. So you have to keep on clearcutting, but I would say that if it is too steep to do selective cutting, maybe it is too steep to do a clearcut as well. People say well how you select maybe is different, you can select with a high-line or you can go in with horses, you can go in with small skidders, you can use helicopters. But I am reading right now to find out just what it means myself.

Panel comment:

Thank you.

Panel comment:

Thank you very much Judith. I appreciate that presentation. I need your name and address, Wayne, thank you.

Wayne Deluca
5962 Brown Rd
Port Alberni
V9Y-7E8

I am a hospital engineering, but I still consider myself indirectly employed by the forest industries since that is our primary resource here. I don't pretend expertise on any aspects of logging although I have worked in mill situations throughout the valley. I've some background in some of the controversies that we've had going on in this area, especially Carmanah and I find Nahmint an extremely important situation for this community because it will be an example that we are measured on. As we know, we are in the midst of controversial re-evaluation on BC Forest resources and coming through Vancouver the other day, I saw a bumper sticker that kind of summed it up with "A Tree Farm is Not A Forest". Now that's what people are arguing over, what is a forest, it seems to me especially cosmopolitan people. Nahmint is an opportunity for the community and MacMillan Bloedel to show cosmopolitan people, in BC in particular, that we can prove multiple use is a workable concept. Toward this end, I would suggest the panel consider the following whatever the final logging plans are that are approved. I can write this out for you a little better....

Panel comment:
That's fine. Just fly at it.

Response:
I think MacMillan Bloedel, local government, the Ministry of Forests, and other interested parties, should provide and promote continued public education as Nahmint logging continues. I think that there should be tours, forums, etc, and opportunities for public comments and criticism as logging proceeds. The management working plan should be kept in the public eye this time because it is such an important opportunity when we've taken the time here from the various ministries represented and local politicians. That we shouldn't allow this to be a one-time issue that it hits the press as it probably will and has so far and dies out. If we're going to do a good job over there, or you are going to do a good job, let's show everybody as we proceed. To follow up on Mr. Mearns idea that the legitimate representatives of the working people who are affected when there is job loss should be on a committee. I'd like to emphasize I agree with that. We need to have a union representation because I think the polarization of environmental groups and other share groups etc., that's lead to some pretty vicious dialogue from what I seen is maybe counter-productive to the process. But that unions have a ligitimacy that would be accepted by the general public as having a place in the process. If we continue the controversial attacks on one another with different groups, I think it will come down to a numbers game that this community and others like it will lose because we're simply out numbers, we don't have the same media access and

this is not necessarily to criticise environmental groups it is just to state a fact. They have the access, they will win if it comes down to a numbers game, so again Nahmint is an opportunity to deflect a lot of the criticism by proving it can be done. I think pressure for environmental allocation of the remain old-growth can be expected to continued, whatever the outcome of this Nahmint Management Working Plan, whatever is approved, how much is set aside or if it's all logging. Port Alberni and communities like it haven't seen the last job loss due to park creation etc., but it is time to make the economic consequences for the people resource, that another speaker mentioned, part of the process. Somewhere hidden in my future tax deductions will be compensation for MacMillan Bloedel for Caramanah Park's creation. I don't understand why there won't be a similar deduction to help either with job creation or job reallocation or whatever is required to move contractors around or provide for the people who are going to loose jobs from that Carmanah creation. The same situation could happen with Nahmint. If it turns out that a certain amount of land is alienated as far as fibre, then people will lose jobs in this community and I am sure of it as we all are. Why won't there be some kind of plan as part of this process. It may not be within the scope of your jurisdiction, but surely you can make recommendation to higher levels that that's should be part of the process. I also think that it is time for our community, regional, and other political representives to make an emphatic case at their appropriate levels for this compensation is part of the process. I know that is not within this panel, but on record I would like to say they should be making an emphatic case. We should see that, that other people will sit up and pay attention when it turns up on their own paycheque. When you can explain to somebody in Vancouver that he is now paying x's amount this year to compensate the park he is benefitting from, but that people in Port Alberni have loss jobs for, he will think through the issue I am sure a little more than he probably does right now. Also I don't see why can't have a situation where our Regional District and our Tree Farm License or TFL 44, is obviously targeted as we know for a great deal of preservation. Why is it not targeted for replacement as Mr. Kokura of the job loss that will cause. Why is it not targeted for secondary industry if there is going to be a decision made by the MOF or at a political level to alienate more of the local resource at some point in the future as part of that decision, we should be targetting this communty for replacement job creation. In closing I would like to say as I repeat myself, we haven't seen the end of this forest environmental controversial decisions that will affect this community. Nahmint is all the more important as an example that should not be lost on the rest of the public in this province. This is a great opportunity for the people who work in this community to prove that they can make multiple-use logging a workable concept and possibly even in some cases, enhance environmental and recreational values of particularly to the access to the area. This is again a great opportunity. I hope everybody in this room rather than getting bogged down like I see in some of the reports on the Clayoquot situation with arguments is to look at it in a possitive sense as an opportunity for the community and I would suggest the anybody who holds back or tries to defeat the process in doing serious harm to the community.

Panel comment:
Thank you very much Wayne. Mike do you have any questions?

Panel comment:
No, but I do appreciate your comment and some sort of environmental tax that if the land-base is taken out that the workers are compensated for loss of jobs.

Response:
There is compensation for others, I don't see why they should be excluded.

Panel comment:
I agree with you. I want to point out though that because this is a technical committee, we are looking at a particular plan. We won't be able to address in our terms of reference that particular matter, but I want everyone to know that no matter what your comments are if they don't fall within our terms of reference they won't simply be abandoned. We will pass on to the groups with government that we think can best respond to your ideas. Those ideas that we heard from you. So it should be incorpoated either as part of our report or as an apendix to our report. The points of view that we heard about that were outside our main terms of reference. Would you like to make a presentation now? Thank you.

Mayor Gillian Trumper,
City of Port Alberni

Thanks very much I'm Mayor Trumper of representing the City of Port Alberni and just before I get into these brief notes that I have. Just with some of the compensation that is go on, earlier. As some of you know, I am member of the provincial round table on the environment and the economy and we've had a rather difficult two days, put it that way, in Parksville. On trying to decide how we are going to do the things that so many people want to do. But one of the things which I think may be of interest particularly to Judith and some other people is that we are trying to put together a mechanism where we can have local round tables and give some guidelines as to how they can be set up so that the comments that you made about making sure everyone is represented and is there for the to try and work something out. We haven't come to grips with that one yet because it's not as easy as everyone thinks it is, but we are hoping that, that's one of the things that the round table will do is to be able to give some help and direction and and maybe support to getting a local round table set up, but we also want to make sure that you know, that the same sort of guidelines etc., go right through the province. So that each round table locally is on the same wave length as others, so I just wanted to, that was one thing that did come out. I am in no way here to make out that council is an expert on forestry processes. In fact we have only member on council who probably has more knowledge, has some knowledge of the forest industry because he is employment particularly and is an IWA member. So is knowledge in his area. So that what I am just presenting to you are the views of city council and they are fairly general. I would like to thank you for the opportunity to present our views on the develop of the Nahmint basin and we are specifically keeping our comments to that. We and I as the council are the duly elected representatives of the city and we do live under a democratic system so that everyone does have the option to disassociate themselves from us if they wish at the correct time. The Port Alberni City Council has been on record continuously as being in favour of sustainable development for British Columbia and I know that the words "sustainable development" has many meaning for many people and as an aside that is something the round table is trying to wrestle with as well. We view the Nahmint drainage basin no differently. Currently the drainage basin has a history of logging and recreation use. In fact the logging activities has assisted the average member of the public to visit the valley and enjoy it's amenities in the past. For those who believe that until this process is sorted out, that logging should cease in any drainage basin or any other area that is in discussion, we believe that this is not the right approach and makes no more sense that in telling farmers they cannot grow crops on farmland or telling orchardists they should not remove over-aged trees and replace them with new ones. This is not to say that parks are not necessary and council has gone on record repeatedly supporting the efforts to preserve and enhance Cathedral Grove and the Pacific Rim National Park. In fact many areas on the west coast would not be accessible if it wasn't for originally having logging roads put in place and those of you that have been to the west coast and know that is the only way you could get there at one time. The Nahmint Valley is 22 miles long running from the Mount Klitsa area through Nahmint Lake and into the Alberni Inlet. The valley contains approximately 13,000 hectares of old-growth forest and I hope that is the correct figure.

Panel comment:
Pretty close.

Response:
In 1975 the Nahmint Watershed Integrated Resource Study was completed and provide for the resource plan for all users including timber supply and addressing the environmental concerns of that time and we certainly all of recognize that

those concerns have changed. This study was revised in 1979 and in 1989 and we believe that the process that was in place, was the correct one and I think that it is unfortunate that due to, I don't want to use the word poor practice because I think that's coming from someone who is uninformed, but due to an incident that did particularly happen in the Nahmint basin and which was not dealt with correctly. The whole of the process that was put in place is now in question and I think that was very unfortunate and need not have occurred if the right process been done. We are pleased to see that all sectors of the public will have an opportunity to comment on the forest management plan's in the Nahmint basin and the many uses that the valley can put to. It is our view that the method of develop currently in use in the Nahmint drainage basin is evolving in an ordinally appropriate manner and should be continued. And will be successful as long as the process and rules and regulations etc., are adhered to. In just a comment, we do not want to and this is a unanimous position on the part of council, that we are of course we are concerned of the loss of jobs in the community. We are also concerned about what happens if there is a moratorium put on the Nahmint Valley or other areas, the spin-offs that it has, it then will have an effect on businesses in the community. It will have an effect on hospital, on the school system because there will be a loss of jobs in that area and I think that one of things that does get lost in the whole process is that we are a resource province still. Things unfortunately, cannot change overnight and if it was not for the taxes come out of our resource industry, we would not have the hospitals and the school systems that we do have and I don't think that anybody wants to see a backward step taken in those levels. In fact there are many us who think there should be more money put into those areas and have far better standards. But we do as a council, we will not support anyone who is asking for a poor practices. There have been poor practices done in the past that everyone is well aware about and we certainly as a whole are coqnisant that there are great strides being made in trying to change for the better what is happening. And I would certainly thank you for the opportunity of being able to speak at this particular meeting, but I also think that it's something that should be continued on a much broader basis so that everyone is much better informed on what is taking place because we, a great deal of miss-information circulates and it is quite true that I think there is sometimes not a lack of trust and faith on the part of all groups that were involved in trying to make sure that particularly in this instance that the forest industry does it's job properly and we certainly hope and believe that the forest industry will continue to be the main-stay of this community. But at the same time we hope to see a much greater diversification and it is not simple and I can tell you that it is not easy to try and get diversification not just in other areas but in the forest and lumber industries. It is a very, very difficult process as you well know and it's not as easy as some people seem to think it is to bring other industries into do some things that yes it would be great to be able to see happening here. There are many other reasons for that which certainly won't go into. We do support the multi-use of our land base and would hope that any decisions and process that go through does not have a negative impact on this valley. Thank you.

Panel comment:
Thank you very much.

Response:
I know that you would like to see this, but it was put together for me and I only picked it up this afternoon and when I got back from Parksville there was some bits that I don't like in it. But I can certainly get it typed up give you a copy.

Panel comment:
I would appreciate that, but we are also investigating having a transcript made from the verbal comments, if could afford that we'll try and do that as well. But if you can give us a written submission to back up your presention.

Response:
I will get it to you.

Panel comment:
Just before you go are there any questions?

Panel comment:
I have a question on you said that council supports multi-use of the valley, can you expand on that for me please.

Response:
I think that is probably as difficult a one as a sustainable development in a way. We believe that not only should logging practices take place because to keep employment here but it should be opened to recreation use. But we certainly and a comment was earlier on about development at the lake. Very permanent things such as boat ramps and all that sort of thing. I believe and I think that council would certainly support me in that, but we would like to see it in it's most natural state as possible. Is that what you are looking for.

Panel comment:
When you talk about a watershed, you are talking about many values not just logging values although you were focusing on logging values.

Response:
Particularly on Nahmint. I was only talking about Nahmint.

Panel comment:
There are other values associated with Nahmint, like fish and

wildlife values just as an example and there are also some tourism values. Certainly the council doesn't take the position that's some of these should be eroded relative to the forestry practices.

Response:

No I think this is why I said the sustainable development which is the very difficult one to, depending where you are, how you define that, we would like to see all those aspects that the industry is allowed to continue in there with the same time protecting those other things that make up the whole spectrum of Nahmint Valley which the wildlife, tourism, hiking, fishing and everything.

Panel comment:

Thank you. Rick do you have any comments?

Panel comment:

No, thanks very much Gillian.

Panel comment:

I had no questions either. Thank you very much.

BREAK

Panel comment:

Thank you for your patience and could I ask you for name and address please.

Sue Fraser
3715 South Morgan Crs.
Port Alberni

And Judith has covered quite a lot of what my thoughts are. This is very impromtu too because I didn't really know this was going on, but I have one or two comments. First of all regarding the resources. You have to remember that the resources of our province are not the property of those industries that are developing it. For example the Fletcher Challenge. A company in it's own country would be put in jail probably for what it does. And yet when the Clayoquot Sound committee group ran into difficulties, it was partly because half of the sulphur pass area and Shelter Inlet, had already been handed over to Fletcher Challenge to do what it wanted with it and that left Tofino in a real bind. Where did they stand, where did they go from there and they haven't had very much support from Port Alberni and it's very unfortunate that these confrontations develop and you people there see as Judith saw the urgent necessity for people to get together, which can be done and Gerald Cormack at yesterday's round table showed how through negotiation, the so called spotted owl crisis in Washington was partly resolved through his mediation. And the hard, hard work of all the people who are dedicated to it's solution. It takes a lot of time and a lot work and a lot of patience, but let's talk about it. We've got time and words matter. We can't keep these inside our heads. Let's share what we think and it is surprising when we do this how many ways we think alike. As Judith tried to show. There has got to be committee involvement and we're not enemies, we're one community, we're a sharing community. So we shouldn't be having these horrible confrontations. I wasn't here at the last one, but thank goodness I went to a botany lecture, but I read about it. As far as jobs are concerned, people say jobs, jobs, jobs well when the Canadian Pacific shut down, fifty jobs north of Hot Spring Cove last month, there wasn't a word said about it, but if there is a park set up, my goodness jobs, jobs, jobs and we all know that what the future holds in regards to jobs. You will need to look at pictures of future mills with two or three people fittling with buttons. That's what we're facing. We've already faced it here in town. Five years ago was it and 2,000 people who lost their jobs. And we've got to work things out, we have to work things together by community planning. Now this round table bit seemed very hopeful to me from what I saw of it yesterday. Especially as Mrs. Trumper said local round table bit, but the whole thing is wrongly set up. The people there are elected, you and you and you get together and form a round table and I think that we have to start from the grass roots and get people much more representatively involved. For instance I think that there were three women on the round table out of 31. One native who was not terribly representative of native groups and that has got to change and I think perhaps if people had some format for election that it would be more democratic, but anyway there has got to be a better format

Tape ends
Tape resumes after short interval...

...obtain approval of M & B methods. And the efforts of environmentalist or better ways of looking after our planet, are negated through this type of education. They are trying, young teachers in our community who see the degradation of the planet, are trying to show their youngsters what they can do to help. And they respond, but it has got to be more. As far as Nahmint is concerned, the Fall Fair yesterday at our environmental booths, a logger came up and said "I'm a logger. I don't like what is happening here's a donation." Indicating that there are people who do not approve of this process of clearcutting, of slash burning. What do you think all of this haze is right now. North and south of Tofino there is a massive slash burning thing going on. Using up the carbondioxide that is causing the green house affect that has made this summer one of the hottest ever. Out of the last ten years, six years have been the hottest that the planet has seen in this century. It is no fallacy. I've seen Nahmint only at a distance. I wasn't terribly impressed and I am not very much impressed with the photographs here. If you are going to have logging, why log first and mess it all up and then make plans? Ok? Make your plans before you go ahead with this. It's the same in Carmanah, I mean you don't, why plan to log the whole thing or even part of it, before you've really got a good plan in place. It matters, it matters to the future of this planet. As far as logging and mountainsides are concerned we know, we already know the effects of slides and the fact that there were people killed from slides that were directly caused from clearcut logging on the mountain. This made headlines in the paper this spring. Sorry to interrupt, I think I better quit because I think I have said all that I want to say, but thank you very much.

Panel comment:
I really appreciate that. You mentioned the matter of the plan. The purpose of committee actually is to review a plan that has been in place for fifteen years and actually has been guiding the development of the Nahmint Valley. That's our purpose. That plan was a good plan and generally acknowledged, I am just not saying my own opinion, but generally acknowledged to be a good plan of it's type at the time that it was made. It was in fact it was considered to be a new model for planning, but it is now fifteen years later and it's certainly hightime that we had a look at that and brought that plans standards up to what we now currently expect and so that is really the purpose of our efforts here today.

Response:
I don't know where you are coming from. Are you are on the Forestry side. Oh yes there is your forest......

Panel comment:
I am with the Forest Service.

Response:
Yeh, good. We're really supportive of foresters and the giving of a lot more power because if the forestry department doesn't look after our forests and are interests, who will? Not the politicians, not the industrialists.

Panel comment:
Thank you very much. Anybody else have any comments?

Panel comment:
Yeh, I have one question if I could please? I just want a point of clarification. The beginning of your talk you talked about some problems with the Clayoquot Sound Taskforce regarding Shelter Inlet and half of it being given over to Fletcher Challenge recently.

Response:
And self sulphur pass.

Panel comment:
I'd just like to clarify that that was a short term logging

issue and one block was given to them that did not encroach on Shelter Inlet. As a matter of fact there is a 30 meter buffer-strip plus the top of the mountain that stops it from going into Shelter Inlet. So Shelter Inlet, itself, was not encroached either through landscaping or through logging by that short term resolution.

Response:
Thank you I misunderstood.

Panel comment:
I want to make one comment and you said that the politicians will not look after anything. Politicians are the only people that you can .....

Response:
Trust! Come on!

Panel comment:
No, I didn't say that, but you can elect them, you can laugh, it is a bad process, but it is the best process we've got and you made some statements that should be, as far as I am concerned, either clarified or corrected. I view myself as an environmentalist otherwise I wouldn't be sitting here, but there are degrees of environmental concerns and you seem to think that the world is coming to an end, green house affect and so on. And I agree, there are problems, but I would suggest that I see environmentalist driving up with cars here and not walking to this meeting and they're doing everything else everybody is doing except they are prepared to critise everymove that is made. When I earlier stated that I have some concerns. Like everybody is saying jobs, jobs, jobs are nothing, well I would suggest to you that if there were no jobs, we wouldn't even have this forum to take care of and perhaps there wouldn't be a town in here either and so there are people that have an opposite view and you have to appreciate that. A lot of the people in here seem to think that the environmental, the strict environmental position leave everything alone is the only position that should prevail. I take exception to the fact I am an elected person on the Regional District, and I take exception to that that I don't do my job. I am very concerned about and I want it to go on record that I am very concerned with the environment and I would be prepared to sit down, with anybody, if they want to discuss it, but I will not sit here and be critisized that I will do nothing about it because, you know, it's total distrust up to this point. What we have in this province in the forest industry is probably a mess, but that mess is there because it was allowed to continue. It is coming along nicely I think it has along ways to go, but it won't happen overnight because the overnight solution is no solution to it at all, as far as I am concerned.

Response:

Mr. Kokura. I think that Judith dealt with the job issue very well.

Panel comment:

Thank you. Another point of clarification, Judith mentioned the stryofoam coffee cups here. In the Nahmint we had recyclable paper coffee cups yesterday. I just want that to be a matter of record too. Thank you. Ok folks if there is no other presenters at the moment, I would like to take a break.

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